

Feb. 25/63
False B East side

Lichens

No Penguins

2 beaches on west & har
ruined beaches for

{ 25 chin straps
nesting
evident

good lichens
& w. ponds

Next point bet False bay
& Charles Bay Penguin
colony up 400 feet
probably chin straps

Seals, N. entrance to
South Bay Seals in
S.W. pools!!

Notes Sam Condr. Lewis
Feb. 25, 1963

— Spring Point —
sandy grey black
washed wing tips
on top

Penguin
for all

black bill fork
tail below
black above

black patch
behind eye

sandy at Spring
Point

Feb. 23

Oreans
Channel
Bet Vining &
& mainland

Unable to do
it last night.
it yesterday
had to go around
outside because
of snow

South coast Feb 24th
~~East~~ 1963

Trinity, most
rocks & islets

Had penguins

~~all little islands~~

~~Shags small~~

Tremendous colony shags

S.W. dip. of Trinity

Small island high
cliffs carpeted with

mosses & lichens

Do small no buildings
side. | spent I'd
side western

Feb 24 - 63

Gentoo on Beach
id + refuge hut

Chimney stacks on
far side of
Shelby Penin
on cliff 50 to 100
feet high several
jumped over to keep
rocks below in the
flight of Pelicans.

many ads + notes in
Beach.

~~Madras Id~~
Madras Id was reported as
on Feb 23?

Cyanea anthracina
large jelly fish 2 1/2 ft
~~Coreana~~

Mikkilova 1963

Moss samples are
very moist

Shays (Feb. 2 ^{after}
~~Skua~~ nest ^{noon}
an cliff to west
of ~~Argentin~~ station

small petrel bay
headland.

Speckled bird black
stripes over a black
eye

~~Argentine~~ ~~Blue~~ ~~Paradise~~
Rain. fog off a hill
which shows up
in sky

Penquin ear
end Bayde St. Point
^{is one} ~~just~~ before getting to point
~~just~~ a few ~~Wilson's~~ petrels
(one)

~~Feb 2-63~~ Feb 2-63 at 8:30 headland

Chin strap & Gendoo &
blue shags / ~~big~~ in

limited nos. also on Base

Id,

Beyond Base

~~Thrdost changing~~
clothes

Steep cliffs had more
moss & grass than
rookeries which in
general close to birds
has less & in more
cases practically none

Bowt Rouse & her



Argentine
Sta

10/11

Would like to make
comparison with
previous reports
of amount. See

Institute Antarctic
Argentino, B.A.

Arthur Hbr 2nd
time

Feb

Handful

Adolescent

Self

no other

than

and one chi

~~Paralase has
more~~

~~Large frozen wt
probe in hand
also~~

Diary (Chile) Notes in margin

{ Cape Negrovil. } 6 m on
{ Chilean Univ. } biol. or
{ } allied
{ } research
{ } soil sci
{ } terrestrial
bryophyte man
Signy Id (Biol. to be for
South Orkneys 63-64

Hydrographic of
S.W. side of ~~Delapide Id~~
~~Delapide Id~~

With Bad Ice may
work further north

Arxess will be in middle
of British observatn

Id
Signy new programme of
marine biol. range of
conditions // plant and
animal communities of
sub littoral Markings of
Seals & Petrels
& Cape Pigeons

Above notes from Diary Paper.

Halley Bay Emperor Penguin

Scotia arc
~~Bryoph~~ Polytichaceae
Deschampsia

South Ga. Biol (Seals)

Halley Bay Biol. (Emperor Penguins)

Signy Biol.

Summer, special Activities
M.V. Kish Dan.

Seal + Emperor Penguins

Summer Season Personnel

1 mar. Biol.

62-63. Ships relieved.

14 Nov. hand Dickell on Bird Id
(South Ga.)

~~una mujer es tan joven co-~~
~~mo lo aparenta.~~ -

VNA MUJER ES TAN JOVEN COMO LO
APARENTA. - PERO UN HOMBRE ~~ES~~
~~TAN JOVEN~~ LO ES TANTO CUAN-
TO LAS MIRA

Feb. 5.
L. Sel

UNA MUJER ES TAN JOVEN.
COMO ~~SE~~ SE VE. PERO UN HOM-
BRE ES JOVEN HASTA CUAN-
DO LAS VE.

Fish sounds
SAR sonar man
Oceanos. Texts for
oceanography
do be receipted for like
instruments if these are

Banks hotel dept & air
^{over}
mile $9\frac{1}{4}$ 2000 Ashe Bay

Univ. Birmingham
Grass
Deschampsia
Antarctica

Peterman Id
Has large
covered areas
photos showed some

Several acres
in extent

on steep north
facing slopes
of Peterman

Falkland Ids

Prelim B. Lanen
#1 Repr

The Vegetation of the
Argentine Ids
& highib. area
with high ref
to Galapagos Id
G. J. R. B. Sc

Most education for
Physical studies

Quite diff. from
Biol

The trash, about
the oil drums and what
not obviated
re floating laboratory

Trashed up grounds
seem to be rule in
Antarctica irrespec-
tive of nationality

Pellucelas (? young or
larvae

Feb. 29th/63

Most of after noon (I
went to say day in
Gerlache St.

Coboulesco Id. like
Chilean Paradise Wbr.
Id. is snow free area
and more or less (perhaps)
in elevation

Charles Frank Commodore
giving dist. of Angies and
Sni

~~Grassing~~ Feb. 16/63
Trails ~~no~~ ice

edge, seals, &
some certainly Peng
Feb. 16 - 1963 Jan

Feb 15. 1963

One emperor
Penguin has
seen today and
during time and
but groups of
Adelies on ice
on way out to
sea.

1.00 P. M Feb. 16

Berg 7,500 yds

long
1/10 as wide

50 to 100 feet
high

an the 4 mile
run

40 or more is
high and
wide

all green on foggy
is white and
blackish yellow
good

becoming & better
in afternoon
on hill id.

river machine

slight one
may kill

under her back
here

many seals
few or few here

Yan Keel Hbr Feb 13

Frighten ten Penguins

Virtually fast ice

2 or 3 chin straps

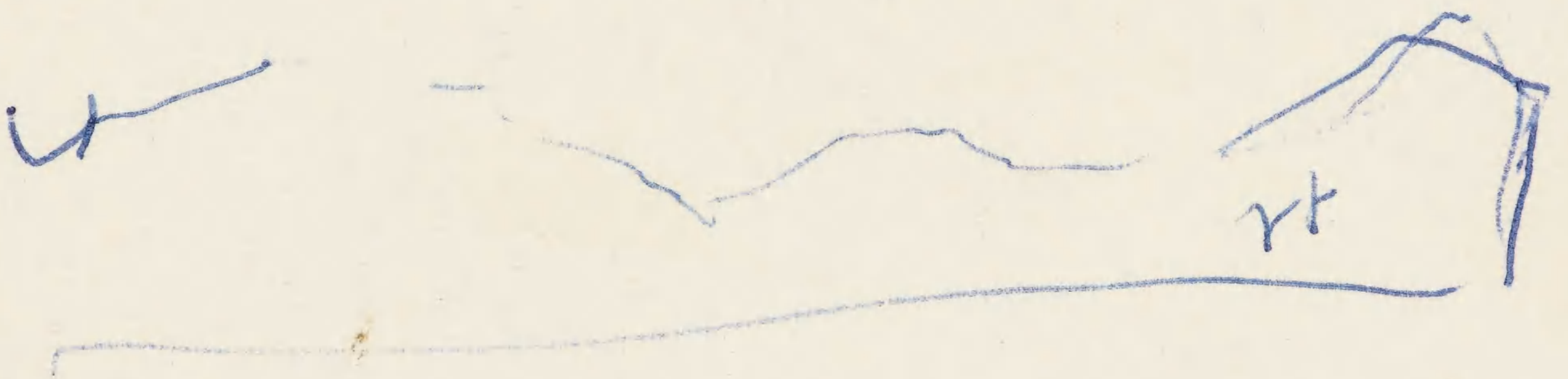
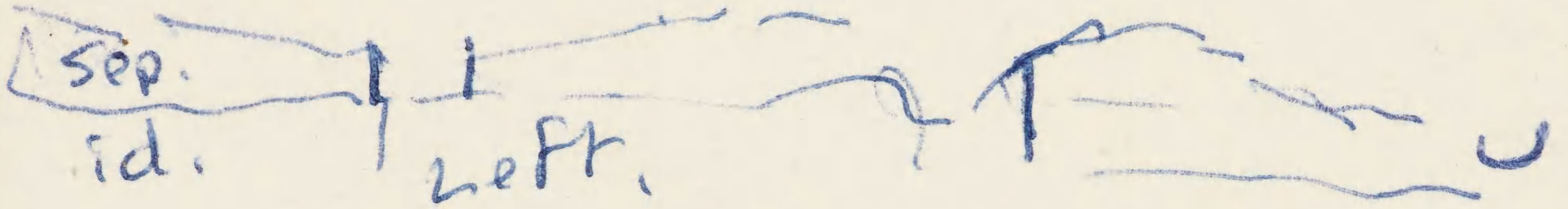
1 a chick all

nest ~~of~~ Gentoo

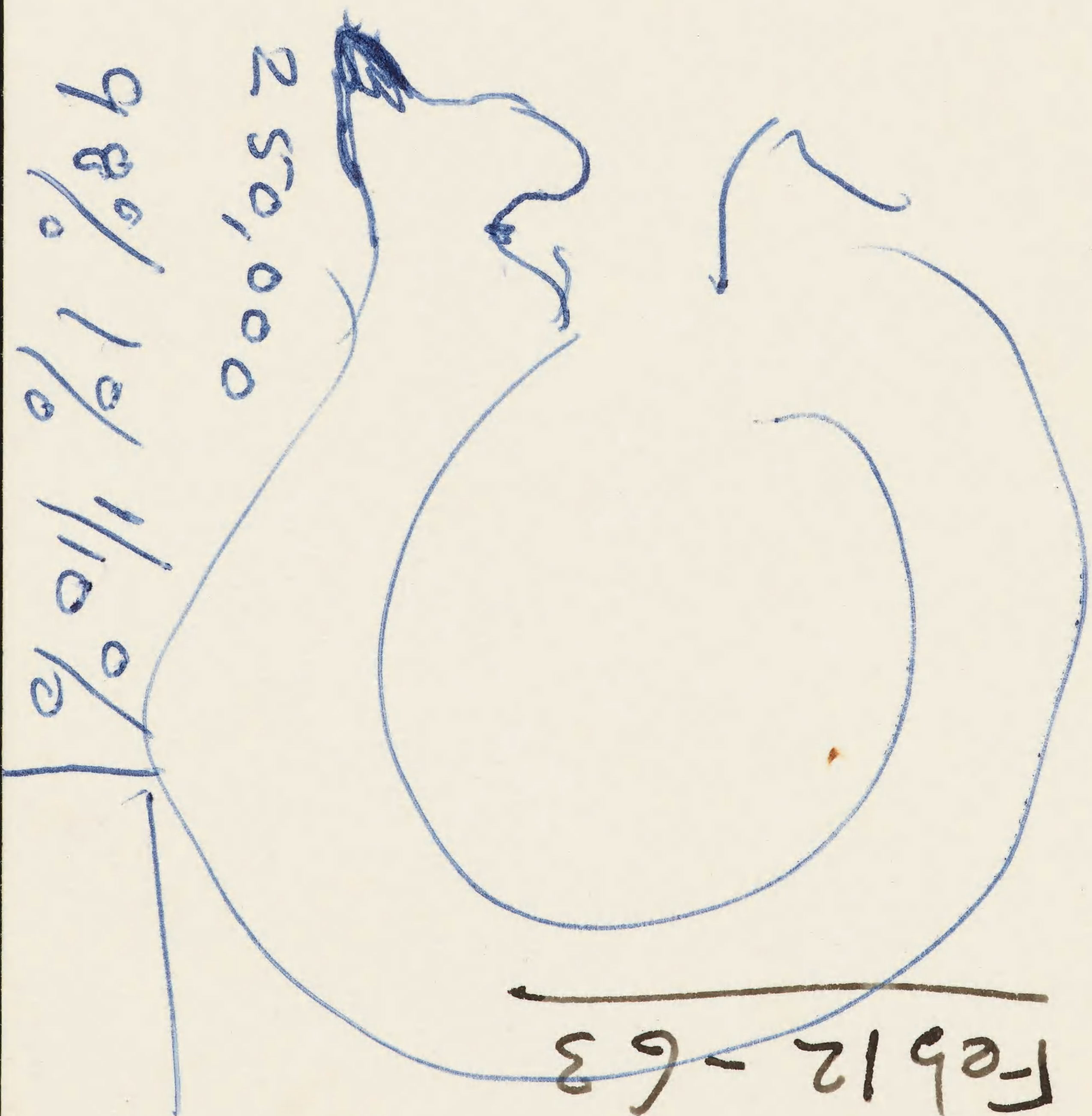
Greenich Id.

Reception Rd Feb 12 / 63

Same still familiar
profile landscape



Feb 12 - 63

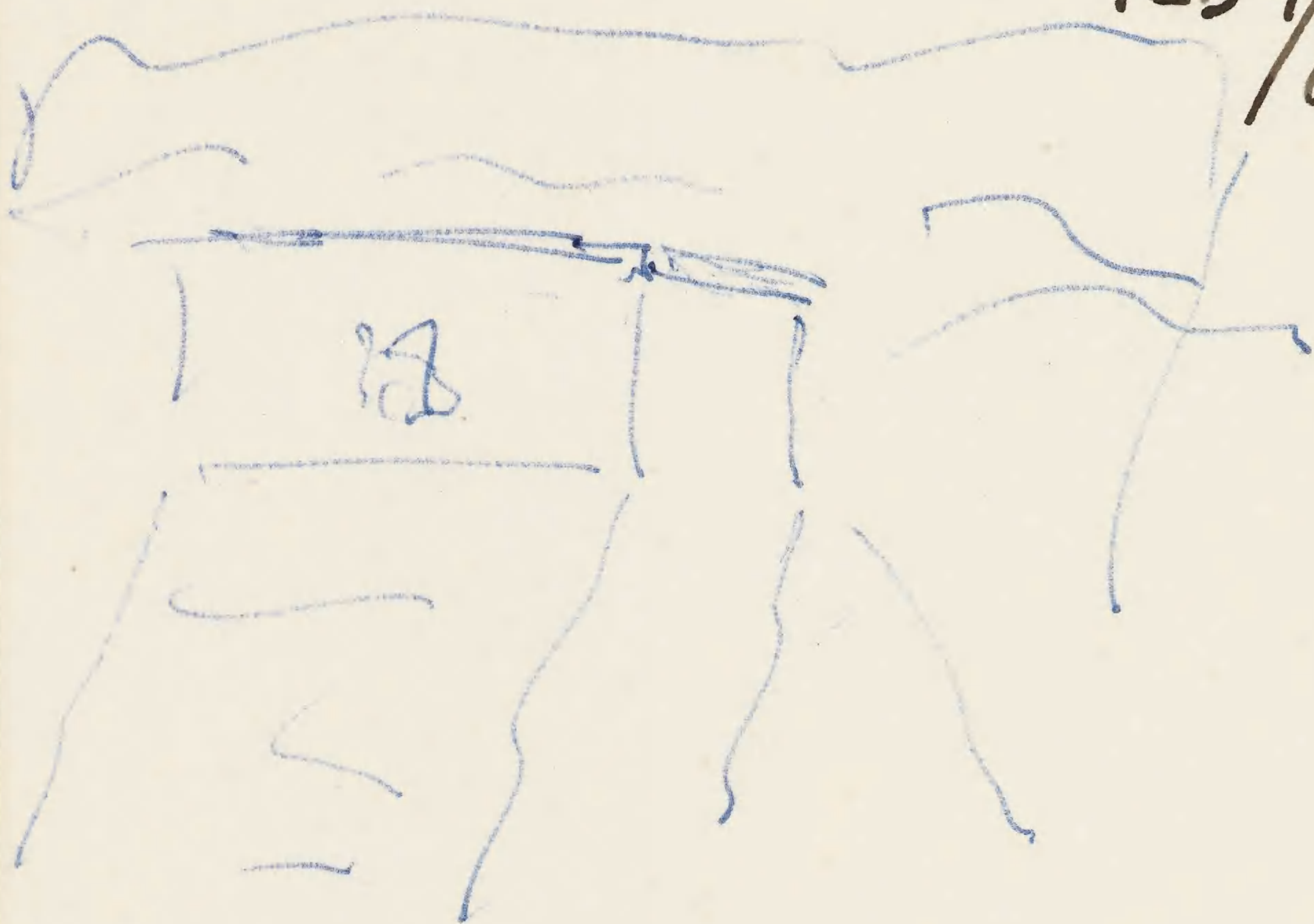


250,000

98% 1/10%

Aspe Bay
An engraver

Feb 9/
/63



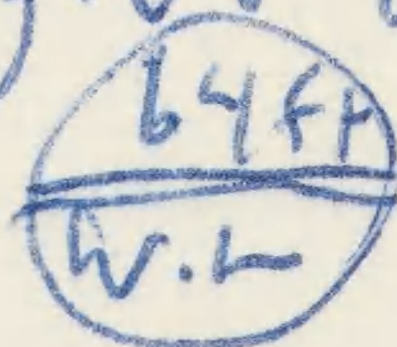
Wind from S.W.

54° standing in sun
in lee of wheel house

side which is warm
to hand. Beside therm

box is high above sea ^{water line}

64 feet right at tip
of my nose



Feb. 8/53 (Feb. 8 notes)
Lapayere Bay

Gourdon Pen.

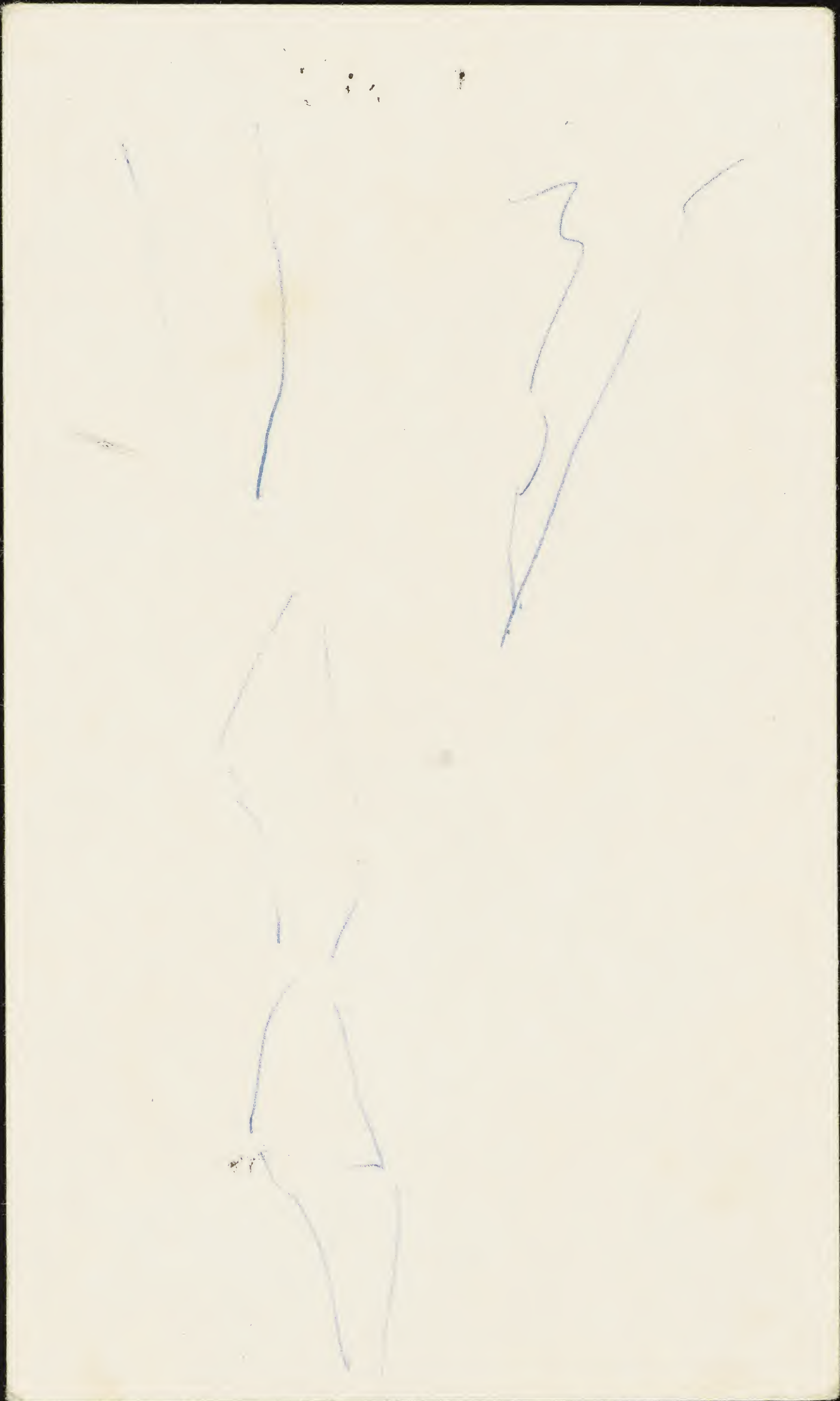
Patagonia Bay ^{in here}
~~Patagonia Bay~~ ^{at 12.50}
p.m.

Thompson Pen.

Fournier Bay
around to Newmeyer
channel

Through the blackish

fog the still blackish snow
free streak (ridges of steep
mountains look like clouds of
volcanic smoke from eruptions
rather startling to step out side
and feel you are looking at a
smoking volcano
over for sketches



Feb. ~~2/63~~ 7/63

12:50 p.m.

Bay View

Garden +

Tomatoes

pen.

at the point

headed in

little white one all
thru from pen

to back of shed
up to entrance
of house

500 n 1000
like da

Bay
Dorion
955

Traps, bait.

dip net 4ge

Tow net

we

Bottles

Bucket on rope for water

Bucket.

1/5ft

Small dredge

Plastic Bags.

Glasses, field

Camera

Exp. meter.

Feb. 7 - 1963
22 14/2X/1

Lahai'e Pt Whales
Peninsula at 6:10 p.m.

Base Whales (Gondier
Pt. Lockroy Id.

Running through
fogging & raising fog
all day considerable rain
most of it in A.M.
went for trucks at 6:30 a.m.

35° Low 37° High, 6:05 p.m.

(Nunatukle Negra) (36)

Spigot Pt. Whales
~~Peninsula~~ (Peninsula)

Like Texen & Pen

Argentine Bure
Paradise Wbr.

Feb. 7-1933
To right we passed Spry Point,
#38 carrying chin-strap penguin rookery -
which otherwise would be
excellent base

Feb. 7. 12.50 p.m.
Patagonia
Bay bet. Gouard
& Thompson Peninsulas
On boat headed in to
show ice cliff, little
islet off Thompson
peninsula to right of
ship, ^{one} looking back to-
ward stern to entrance
of Bay

Feb. 7 1963
Thomson Peninsula

Archowski " "
~~lets get by the office~~
Ice shears City

Langman in the
Tropics (Torchugas)

Ice cliffs in all directions
Saw very few / saw
one penguin rookery
This just before
mid day

~~Feb~~ Feb 5/63

On a mission of
this sort you hear
many things right
a week. The other
half of my expedition
is found in the
long written log
book of the small
boat.

It is the navy that
will determine the
the Palmer Island
station is to be estab-
lished because they
are still the subject
face

Feb. 5/63
1:15 p.m. Sr. Capt
Anna passed
just off ship
Id where Jack
landed for eat
has shell
and shell
Cuthberts
hauled up shells
boat

Cuverville Id.

Sketches inside



Photo'd this but Feb. 5/63
missed lower half
as ridge obscured
by
boulder
no close
before I got at camera.
Face against rock cliff.
Point ^{heavily} over it? second on hear



eyes were
jutting
snow
free part
as was
sideburn
ears
cheeks
+ nose
+ nose
Δ
put
on left
cheek

Feb. 5/63

an unmy Lr
Spitzguth Bd?
dires r f.

Feb 4/63

over land
Spec. ~~Sci. Area~~ life in hot-
d kinds of animals
collected.

land of traps, collected
up but help it was 0
asked for a dodge but
very successful. Almost
lost behind rock.
Bour called SW 2:15
Mar 2:

Clear rock face



April showers in Feb.
If you are going to build a bird

Feb. 13/83
10 am left Chilean

Base ^{amman} ~~Sw~~ rookery

~~Had engine trouble
delayed getting away
in base~~

~~11:32 returned to
let Leonard
pick up photo's~~

~~(at water bow Pt.~~

~~saw stranded &~~

~~which it took all after-
noon to free, after
all afternoon's work.~~

Penguins feeding on sea
weed (amphipods) ^{dining} like ducks close
to shore

Off Feb 3 = 63 -
at 9:05

We hear so much of
the dist. and occurrence
of animals but not much
long term project for an
archae Res been proce-
cuted. — need vessel for
such, and it shall proceed
rather than heater as ~~an~~
orphan ~~off~~ the other disc
things. which are only
working on the obverse
or the instrumentation
approachable problems

The off makes his
observations records the
knock off a heavy rocks
and he is done

the history does
the same, but then
has to preserve or
derive (for maps)
his specimens, his
to handle gear etc.

The larger penguin
stay with Leek.

Hidden really up
place in bay for the
to go in Paradise Bay
yet unexplored shall
not need many birds
if make an intimate study
Paradise Bay is only for
the birds — no
swell when into wild
weather

Jan 31 - 1963
Ber. 1958

+ 60

British;
Base N.
Records.

were but unusually
cold winter with
cold summer
in middle.

July + Aug 58+
av. were abn 00.59
F.

(-18°C-)

Lower than average
temps being 1959
cold summer

Jan 31, 1963

Adelie rookery
first stop 10:30
sack moss + 9 a.m.
some lichens

~~Barros Rocks Id~~

Shags go under water
as do penguins

Behross Id Mt Pear
Mt Shudd

Cape Vuxen muzz

Shag colony

west side green
Id. moss p. crag

School shags 20-30

Jan 28
11/5 Flight to
Pederman Id.

A shore on Penguin
~~Id.~~ gentoo's and
some Adeline I was
ltd near

back by 11:45

Pleneau Id
by Ima

Jan. 28? 1963
Pleneau Id off
Hovgaard Id

Wash

Latimer

—

Jan 24th afternoon

left ship at 1⁰⁰
ret'd at 2, for
shore parties &
transferred gear
partly to other
side of inlet
quieted area is
very short & outside
is landing not
but site is no
more

Do roughly to pick
Traps further out.
Inside inlet crushed
trap took on home.

1 october for hatch
2 " volume for
wedged one, but
both the parts in
fragr. 4 order
had to ship, I
spent 1/2 ashore.

Ice bar
High as ²⁰ 10-11 am
by landing

though turn air
rough to sea
few birds seen
now to D.M. since
north 1/2

Jan 23^d Wednesd' 63
Away at 8:45

Thought I could take
next day but
wind scuttled

High winds must be
frequent wind

scuttles of being
important sign

Wind blew ice
away ~~one advantage~~

Back to ship at
11:30 and down

Wine fix radio.

Fish caught in bd.

Wed. - Jan. 23/63
Branch near clay
vegetation, roots
filled
with in large
lake

Compass Point
Shihua
were worried about
us yesterday with
wind getting up &
radio not working

Jan. 22 up at 5:30

6 A.M. School for 6:15

Fish 6-9 in the
Penguins ad diving, &
chasing after prey

21st would not
let fish come
over side till

partly notice
which never
came

Jan 20

Other on BX

Term column

Longer hand
on far side ^{desert}

Benjamin North

for Benjamin
seals at work

3-4 Whales
sharks; terms
amphibians

perhaps dozens
isolated seals

Saturday, Jan 12, 1963

11:30 am Emperor penguin
on ice cake

12 noon sooty Albat.

on cake sitting. regg
gibbed two big blaps of
foot to take off barely
got away before bow
headed strathin.
Stew off

Came stand on bridge order
birds but.

Yesterday snow petrels

Capt. saw seal & shear
penguins or penguin

8 p.m. yesterday crossed
Arctic Circle headed S.

Snow petrel at 12:25
before & across bar =
(over)

Did I also see a
Wilson's Storm petrel
certainly when I took to
the upper side looked
like 17 or 18 or 19 of Alex.
but what does 12 (Wilson's look
like from below.

11-I-63 00.04

steaming -

Manoeuvring to avoid
icebergs + bergy bits

0504 sighted ice pack

08-12 Man. avoid icebergs

16-18 } scattered icebergs
18-20 }

12-I-63 13 knots base
speed

ice coverage to 6/10

16-18 " " 8/10

ice floes to 8' thick

20, 24 visibility to 1 mile

13-I-63 broken ice pack

12-16 manning in circle
around "medium tabular
iceberg for pictures

16-18 ice pack cover

7/10 thickness to 8-12 (on)

16-18 ice cutting
~~over~~ decreased to 5%
increased to 9/10 %
1820 Left ice pack

For many years
because of being
in danger.
on boat with 10
hand with eye 4
in 4 men can ride
Boatman
ice cliffs to 24
that my and
no chance on

6:00 am Mon (11th) Friday

Field of brash

ice few small icebergs

smooth sea - snow petrels

arched berg after lunch.

much arched one later

ward to be on dock +

below at same time. The

Continual putting on + taking
off nuisance.

Fish + oyster stew to-day.
for lunch
- lemon cream pie. -

hurried out back of
clothes over shelf

Went up to ice first

+ so missed breakfast

Paul Arthur Feb 5
63

Hum anistics

Versus Logistics

Mar 1

Farnd B a g l a Bay
Shay colony str
bd side head in

Looey. Neumayer
Channel

Lot of penguin
swimming in
channel

low netts would
show

Jan. 5/63
10 a.m.

Wind Direct. 059
Force 15

Visibility 10 miles
Weather o.v.c. (overcast)

Barom. 30.11

Temp. Dry. 59

Wet 57

Clouds, amt 10

Height 1500

Type S.C.

Water. 50.9

Waves 090°

Dir, W 1-2°

LEADER - BRENDON LYNCH

WIRELESS OPERATOR - LEWIS

METEOROLOGISTS - H. D. ASHWORTH

Deception Id ~~Id~~ A. BOTTOMLEY

at Chilean Base G. KYTE.

DIESEL MECHANIC - J. TAIT

Sheath-bills only resident bird

No fishing, all birds off
jetty

Boats for Ruro

Flights by arrange-
ment

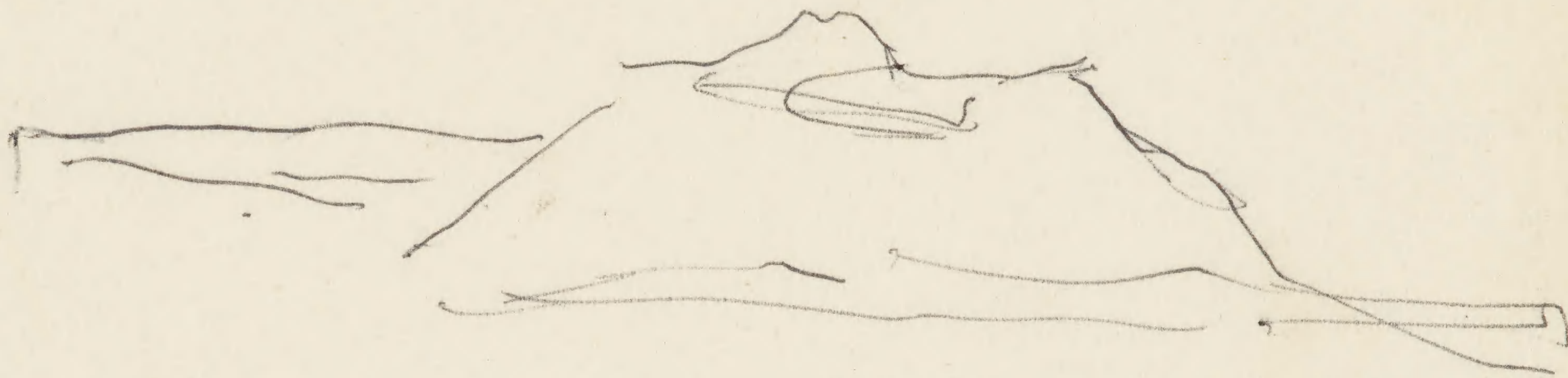
Boats to Right hand

Emduded logs to

low level

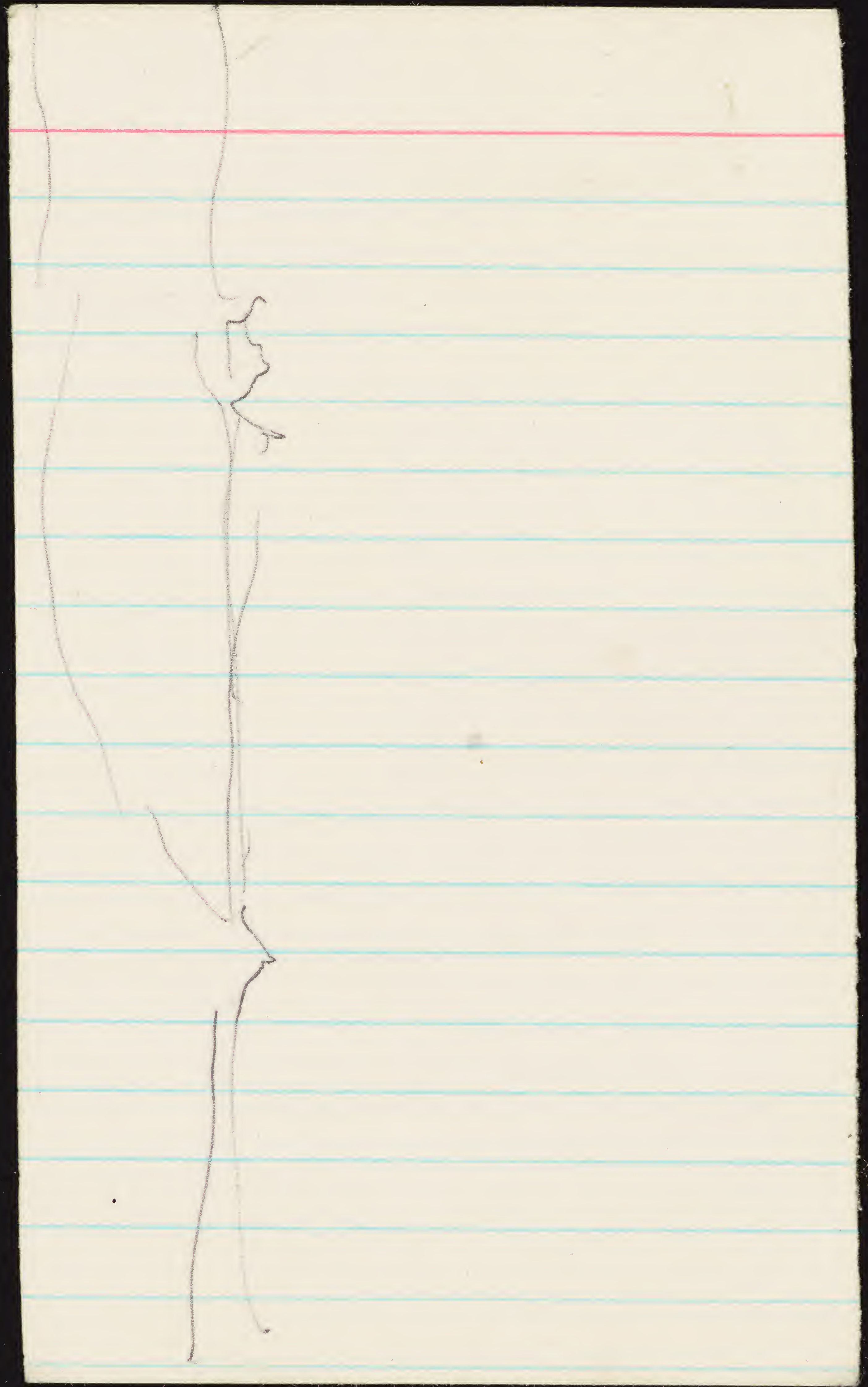
1 which include spot
factor

2 Seal Pile 3 Hops



limb rump
bas neck but
no head

spray up 75
see 10 above the 62 mark



Svend Foyn ^{P. 194} ¹⁸²¹

Fine weather
is reported to
prevail, but
southerly easterly

winds are
violent at times

C.F. Kyte Birds
Falklands; + Galindez

64/22/5

57 00 W

~~8m Hill~~

Seymour

Gross

Valley

Fis of B.A.S

~~Ice free id~~

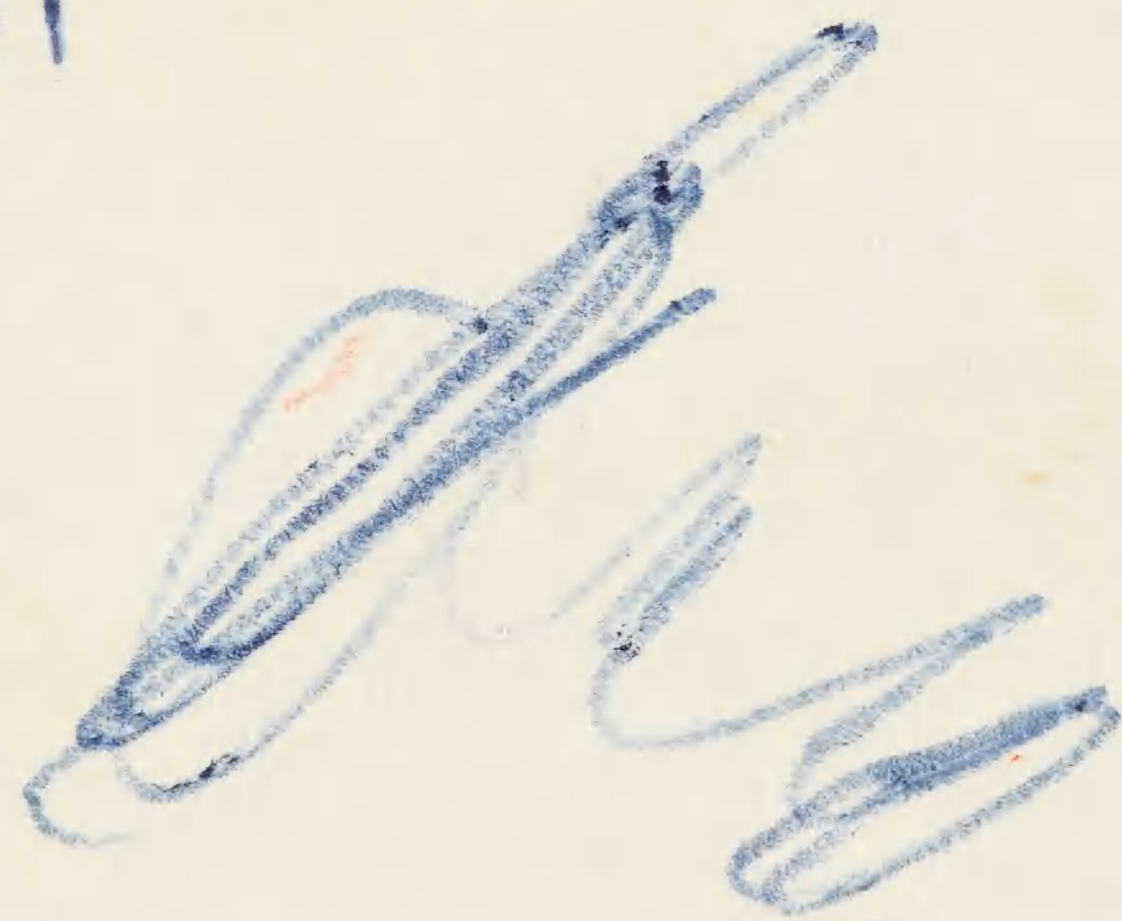
sea has ice

Ice covered side
sea free

Argentine
~~at~~ ice breaks
frozen in 10 days
last year

Paradise Bay 1919?

Here



Chiñ straps &
Shugs

on DUTHIER PT.
Anvard Bay

March 1 - 1963

gentle

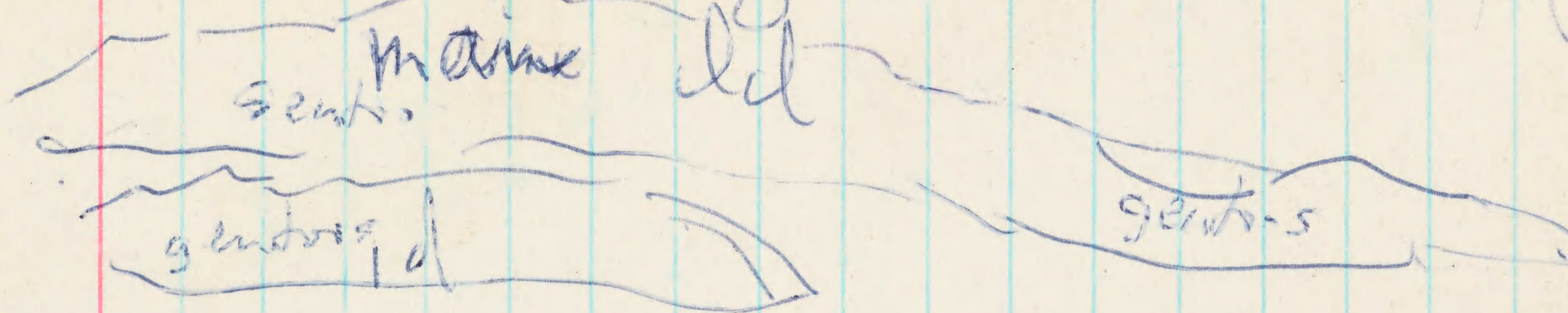
chip

gentle

black pack +
sent

warm/now/
lot of brown ice slow about station
High tide very little from shore / sent tickets

I found the state have rocks
in back of state have rocks
to top most cglm looz scattered



Penguin track very sandy
about Base at 5000 ft

Feb 20
Y S I Tele Rhermonde

In these "modern" days
of instrument man it pays
and is impressive to
carry some instruments
for radiation, carbon
measurements, Thompson
& what not. Biologists
are just trackers in mess
and dirt. And a couple
of men to carry them.

Cape pigeons today
not seen at Seymour.

Dominican gulls
show red
And archaic tern
few in numbers
or if no nesting sites
nesting here only 150

~~Handicaps~~
Good holding grad
is stiff sandy
mud and has
a limited form

Our dredge
was started
slowly fast
~~made~~ ~~arriving~~
at the

Tow net hauls

Lost trap.

All the hauls were
disappointing
except at least

T-1	Marquerite Bay	Jan 18
2	Bonaparte Inlet	Jan 24
3	Arthur Abr.	Jan 25
4	Port Lockroy	Jan 26
5	Pederman Id.	_____
6	} Galindez Id.	Jan. 29
7		Jan 31
8	Paradise Bay	Feb 1
9	Bryde Id.	Feb 2
10	Paradise Bay	Feb 4
11	Danco Id	Feb 5
12	Melchior.	6
13	Sven Foyh Abr.	9 (2 krill)
14	Whalers Bay	Feb. 12
15	" "	Feb 13
16	Hope Bay	Feb 14 (Sulps)
17	Welchness	Feb. 20
18	Atcock Id	Feb. 23
19	Discovery Bay	Feb 26
20	False Bay	Feb 25

On the way to the ~~next~~ ^{to go to} area
of ~~Investigation~~, the
Argentine and nearby
islands the Staten Island
~~passed through~~ the Le
maire Channel. The
night of January 27
was spent drifting about
in ~~this~~ ^{the} scenically breath
taking ~~stretch~~ area
where the mountains are
as impressive, ~~and~~ indeed
~~beautiful~~ as fantastic and beautiful
in form and shape
as many of the great
~~sculptured~~ beautifully
^{colored} & sculptured icebergs
we had so far encountered

From Port Lockroy ^{the Staten} ~~we~~ Id.
stea proceeding south
On our way to the next area
~~From~~ The Staten Island
travelled southward ~~by~~
~~way of~~ ~~toward~~ on our
way to

on his journey about
Antarctica for McMurdo
to Marguerite Bay -
Alebaide Island and
strait. To Arthur
Harbor and Port Lockm

The night of January
27 and ~~the Monday morning~~
Jan 28th the ship ~~lay for~~ drifted
about in ~~the~~ absolutely
placid water of his
There was no anchoring
here - virtually no need to -
+ in 242 fms of water
virtually no need to in
these absolutely placid
water. ~~Giving as it were~~

~~ed. Giving as it were~~
~~added stature~~ :

Enhancing many fold
the beauty of our surroundings
with the crystal clear
reflections of the mountains
~~with their feet~~ rising from
the waters edge to where
peaks ~~intermittently~~
clothed with cloud.
doffing the caps of
clouds ~~from time to~~
time so that one could
~~take their full length~~
~~portraits~~ photograph
them at full stature

A few moments to 1000 in
the morning Capt. Metschler
~~gave gave~~ the opportunity
~~was afforded~~ to the
gentoo penguin rookery on Pleneau
Id. After luncheon
a helicopter flight ^{made possible} ~~afforded~~
a birds eye view of the
Argentine Islands, particularly
Pedermann Island +
~~the refugio or hut~~
~~had~~ and the harbor
where Charcot ~~was~~ ^{was}
Porquias Pas spent the
winter of 1902, the English
Bay, / on Galindez Id.
with the supply ship Shackleton
moored stern to

Brialmont Cove Feb. 9, 10, 11 (1)
+ Feb 23, 24

Bird haven, all who have viewed the area from sea or air are impressed by the number of rookeries and birds thereon.

Birds in flight were surprisingly limited in number excepting Wilson's petrel.

These little fellows who have excited the sympathetic interest of the whalers' company. All have talked of, and asked about the ability of these little birds to stand on the water. Jack says their feet are constantly in motion, treading water together and besides ~~there~~ certainly is some wing motion the while.

Also the skuas. One sees two or three, flying by with no particular interest in much of any thing, on their way ^{from} higher to yonder, but let the garbage be dropped and the avian wireless

More penguins
ever saw in my life (Mac)
Gaupe roller (Mac) Bissess
Chin shags
Corm

(2)

seems instantly to alert a host of the rapacious jaegers. 30 or more appear well nigh instantaneously ~~for~~ ~~it~~ it seems.

Though I saw but a dozen to 20 seals on isolated cakes of ice from 20 to 30 or 40 feet across, mostly on the smaller one, a single seal, only once two on the same large cake while we were cruising about, Capt. Mac said in the Cove, ~~and~~ round about on the ice he would say there were at least a hundred. Could well be. Crab eaters they were, as it developed in the case of the one we killed for Capt's mess and bait. I have yet to see a leopard seal, though Capt Mac says that he saw a ^{considerable} number between Salveson Bay and here. I am yet to be convinced. Anyway this 8 foot male when opened up

(3)

and stomach contents examined
had nothing, but Euphausiids in his
stomach, close to 3 gallons in all
judging from mass as compared
with my gallon jug of formaldehyde

The stomach seemed to be in two
bulges (sacs) a large (forward or aft
one) full of whitish (as partially acted
upon Euphausia superba by digestive ^{liquor} ~~liquor~~
= $\frac{2}{3}$ of total quantity, and the small
section with intensely reddish smaller
species for most part even more
digested than the former so I
take it the hinder end of stomach.
[Wish I had a scope & books
needed] To me it is inconceivable
that an animal with relatively so
small a mouth can harvest so great
and mass of shrimp. Certainly they
do not bird like gather them ~~the~~ krill
in piece-meal one or few at a time.
To me it seems that the krill are
in dense schools or masses as
crowded as sardines in a can.
So for the seal it is like taking

a bite out of a stiff "cake" of ^{cooked} oat meal (mush). I am so ~~so~~ ^{so} ~~sped~~ ^{sped} corroborated by the ship's observations made while I was down below on morning of 9th, when ship passed through several reddish areas, shoals of fish or something that reddened considerable areas of water between the ice floes and bird. As I remarked, I wish I'd known I would have seen the Captain (Metze) to stop the ship for a look see & hoped next time that I would be called.

Marguerite Bay ^{rocky area}
^{good base for}
^{area}
^{would be in early}
much ice, making down
netting difficult. Which
~~is not to~~
~~be recommended~~

~~Ship~~ ~~been~~ ~~th~~
Avian Island despite
its seeming bird life, f.w.
pools, mosses and lichens

not favored as a station
site ^{as there} ~~because~~ ~~of~~ ~~a~~ ~~ordinarily~~
~~is usually here on~~

is usually much ice in
Bay, ^{Even so we were steaming on 18th}
^{morning} ^{through ice field} ^{and} ^{could see}

various pilots not ording
open until late February

Ship had to shift position

to avoid sizeable ice berg

H.O.P. 189 (4-74) in early Feb. Marguerite Bay
still filled with ice.

Good buildings — one man
weather shack was about
ideal as study laboratory. 3
? — favor some such arrangement.

1
Rothera Point, as a building
site, open ground, acreage,
Foundation wise

Skuas dived at Lt. Thomas
so determinedly that he
gave up idea of walking around
shore of the Rothera Point
peninsula. He also saw ^{what} ~~evidence~~
~~looked~~ like a penguin rookery
but empty of birds. Though scatter
about. ^{handful} area bet.
rocky ^{at} heights of Point, ^{to} left
of landing and ice sheet to
right.

I wonder to what extent
it is a drain and windswept

~~perhaps 30-40 in all~~
we saw 2+3 ^{here and there} scattered in small
bergs and ice cakes

in ^{engaged with dozen} similar situations at Avian

Jack found a whole layer Feb. 20 / 63
Cape Welchness, ^{of good birds}

Literally immense acreage

For building ^{can} equals McMurdo
also place for dry land
run was of varying length
however drainage needed
a number of watercourses
traverse the lower land.
actual gullies worn in
soil plant life is at a
minimum. scarcity of
mosses and lichens.

Like Seymour would be
a paleontologist heaven

check Nordenskiöld
account of sci
work.

Gannet broken up
old in net(?) little else
visible. Dredge =

Birds ^{Penguins couple of dozen} ^(24 to 30 penguins) ~~scanty~~
few storm Petrel
handful, perhaps
2 dozen Dominicans
2 " terns
saw 2 skuas
Cape Pigeons 2 dozen
or so.

Yemour Id Feb 15/63

Judging from the algae
picked up by Cande
Price Lewis and Mr
Crowell, the area must
be rich in marine life
despite the meager dredge
hauls, perhaps an
deck bucket full of sand
and rocks in the
drags by the side of
the ship (in the wind)
As usual got
some ascidians of
unusual type, worms of
a different nature, and
young ophiurans, an
interested and willing
to "dig" biologist will
surely find a wealth of

Material: Dredging as we have done is almost
less than a square mile of territory or a
handful of anything, it is a
terrific area

Seymour I. In this
said to be an exceptionally
open year landing by
bow, is impossible.

Argentine Ice Breaker
last year was frozen
in (immovable) for 10
days in the ^{F?} midsummer
period; and in a bad
year, what would be
the situation ^{frequent} high
winds are ~~so~~ said
to ~~be~~ be customary
and that would prevent
sailing. Answer

Went on quoting Lash's
remarks:

Paradise ~~Bay~~ Harbor Feb. 1, 2, 3, 4/63

Check on speckled petrel; you had plumage?
were large chicks brownish-gray bills. In flight
had black line over eye.

Adelies few said to be here
by Chilean (at Paterna
they said [up the Bay?])

Sentros most frequent

Chin straps first time in
nos. ~~also~~ also at Dulser pr
Cape?

Skuas

Sheath bills

Snow petrels about

Few Wilson's seen

Seab ~~in~~ few in number

Mosses abundant
and orange lichens
conspicuous

However nesting sites for
Birds limited: Terns by
Argentine

Amphipods ~~large red~~ most numerous

imagined
find areas
of this sort.

Sea weed near surface
at Chilean sta. Penguins feeding on them?

Dredge hauls 2 = diving off
shore

Chap. 4 (p. 140), ^{sect.} 4-4

H.Q. ①

Little Hbr inside Cape
Roquemaurel

small pools → carpet of sea
weeds

Also anchorage

(p. 141) 17 miles above Palmer Arch.
depths of 200 fms.

~~Gerlach St. 300-500 fms
deep.~~

~~Shoals to 100 fms. in wake
of Anvers Id.~~

~~Boat
to
dredge~~
nearby is site of first
discovery of Antarctic
Cont by Palmer

Nov. 17, 1820. Semington Com.

⑩ Submarine Tunnel on east
side of Mikkelson Hbr.
(Hoseason Hbr.)

sect.

4-8

(p. 143)

1970
1820

Feb. 12, 13 } ~~British are~~
~~classing this as~~
~~should be kept~~
~~at least~~ within

Deception Id.

- ① Excellent building sites, dry
- ② Plenty of land ^{perhaps even birds}
- ③ Snow or melt water all ^{plane}
- ④ Boat facilities relatively

easy to install

50, + 250, + 40, + 200 close to

350,000

Chinstrap heaven

+ 400,000

Finest shed

great

Readily accessible ⁱⁿ
much of year by ship ^{from}
or ^{sea} plane; also reasonable
air strip - being improved.

Marine work in hbr limited

~~But~~ But outside should be
incomparable

be aware
of depths
alignments

Deception Id

Alaska Boreas & Q

Well at 65° indicative
of what could be done
by a bit of drilling
would probably solve
heating problem and
danger. This has not
inhibited Italians and
North New Zealanders for
installing tremendous
pump plants in volcanic
areas. Are they any
more stable than than
Deception Id. area?

Heception had 1930 eruption.

Should be outside Pack ice limit
for March.

Rules out Rope Bay
Seymour / snow hill
+ Adelatega.

Narrowedown to Rivers Id
+ King George.

P. 201 Cascade for S.W. on Winter Id Admiralty
 Argentine Ids Moss, peat
 Lat 65° 15' S Large nos of
 Long 64 16' W. birds breed in
 P. 201 line 37 these Ids
Meteorological
S.W. cor. with

"Some possess a peculiar luxuriance of vegetation which is the richest yet found in the whole of Antarctica."

On slopes with northerly aspect are patches of moss covering as much as an acre. Is a peat up to 3 feet in thickness

"This moss is frozen except for the few top inches in summer"

"The Ids are surrounded by reefs, but there are navigable channels between them." p. 201 line 44.

British Graham Land exped winter on S.E. end of Winter Id. Small thr in Stella Creek Large nos birds breed on these

Under favorable conditions can see

Arthur Apr. 22-25 Sea							Wind
Temp.	Max.	Min.	Avg.	Max	Min	Avg	Max M one gust
22	38.1	31.2	34.9	34	31	33	63
23	46.2	33.1	38.1	35	32	33	25
24	36.0	31.1	32.7	34	34	34	Avg. 6-15
25	39.4	31.0	34	34-33	34		

Temp for period

Birds: Adelies numerous
number of colonies in sight
from anchorage

Giant petrels Skuas.

Cape Murores area

common.

Domestic
gulls.

3 Chin straps
seen near hut
at Base N
fido Malloy.

Shore call
small gastropod
marine algae
crushed trap
in Inlet.

dislodged large ascidians

Rocky bottom at Base
Inlet. and muddy

Biologically Redden this
very rich area

Arthur Hbr. Jan. 22-25/63

Bonaparte Point Inlet.

Large ^{clump of} ascidian leaved
Sea weed, algae large red
and filamentous
profusion of lichens
moss patches

large clump of
ascidians small
mollusks

promise of
rich fauna

much of within dip
net reach

handy list
Rec'd Feb. 26/1963
Berg
promised me
list of birds

rocky ~~bottom~~

seal hauling
ground

from outlying Is.
(Jack says many colonies) Giant petrel

Arthur general = Skuas, Terns
Adelie penguins. = Wilson Petrel

Mallard ³ Chis strap. (Thomas saw one)
Cormorants (shags)

Whales seen occasionally

Biscoe Bay to east of Arthur
Hbr. a penguin rookery

(2)

A number of other birds are to be found here too. There are Cape Pigeons around most of the year except between August 11 and September 8; Common also, is the Dominican gull, which here in contrast to its habits in the Argentine Islands is ^a non-resident ^{at} Deception Island.

Why? Could it be that the gulls at Galindez get enough dog food or scrap ^{at} the station here to make wintering over possible?

Adelies / Head normally without any white markings except for the conspicuous white eyelids, the effect of which is enhanced in life by exposure of a large area of gleaming white cornea.

Seals of the Far South (E. G. Turbott)

Weddell Seal heavy build, up to 9 ft.

dark grey almost black, with handsome mottling of white and silver grey on the underparts. By annual moult in late summer its colour has faded to a rusty grey. Stout & Sluggish

Food fish & squid.

Pupping in Graham Land = 3 wk. Sept.

Young eat crustaceans before suckling is over & for few months after weaning then goes on to fish & squid.

Crab-eater seal smaller than Weddell up to 8 ft.

Moult results in ^{fresh moult having previously} yellowish & later white

coat (White Antarctic Seal) Upon moult

Crab-eaters are a rich grey-brown

with irregular pale blotches on sides and lower back giving it a handsome dappled effect. At stage of greatest bleaching, is about white.

Eats euphausiids, strains out with cheek teeth as sieve; occasionally eats small fish.

Ross Seal only 50 have been seen

Food chiefly cuttle fish & squid, more rarely crustaceans & fish.

Has swollen blubbery neck into which head almost disappears when withdrawn.

Reaches 9 ft. Is greyish-brown or black above & paler below, with distinctive pattern

of oblique pale streaks on the sides

Sailing directions, and illustrate deck
cf. whale pictures

Leopard seal up to 12 feet.

Long snake-like body with large head
Post canines 5 on either side
are powerful 3-lobed tridents.

Solitary in habits.

Skin dark grey which blends into black
towards tail. On flanks and shoulders
it is mottled black and silver
Feeds on penguins, and other seals.

Crab-eating seal up to 9 feet

Small head and short thin neck
skin yellowish-white, or mottled with
brown and silver

Fix > Canine teeth well developed
Gregarious Feeds on krill

Weddell seal up to 10 ft.

Coat is black, brown, and
silver grey, the back being
darker than the under surface

Canines of ~~the~~ worn from dig-
ging holes in ice; incisors recurved
and hook like

Avoids pack ice; usually found
on fast ice along the coast in
large numbers during the
summer months. Feed on fish
and squid

(Admiralty)

Weddell seal most southerly
ranging of all mammals, and
Crab-eater seals are tolerably
plentiful in parts of Graham
land. Former in most parts
of peninsula and islands
latter an inhabitant of pack
ice, Leopard seal less fre-
quently seen

(Admiralty)

Leopard Seal. Diet is fish & cephalopods, but bulk is obtained by preying on other seals and especially seabirds. Most important food probably penguins. When bird is killed, is brought to surface and so vigorously shaken that it is ^{at least} partially skinned. Also feeds on dead carcasses of dead whales & seals. Has killed 3 adult seals of other species.

Colour dark grey, shading to paler grey below; neck and flanks are distinctly splashed and spotted with silver and black. Immature animals are more silvery grey than adults.

Antarctica 5 1/2 million sq. miles; ice 10,000 feet high

Antarctica, Today and Tomorrow
by G. C. L. Bertram; Univ. Otago,
Dunedin, 1957

Admiralty.

The humpback when diving
throws its flukes out of the
water like the sperm and
right whales

Shape of dorsal fin is the
best guide

Fin whale is most common.

Miller Richard Borden, N.Z. Journ Sci. Vol. 4
6 species Trematodus No. 3
1 Notothenia 1961
pp. 664-68

- A. 3-4 meters depth. blasted hole
B. 6-8 " melt hole.
C. 1 " ice foot
C₁ similar to C.
D. 6-15 " close off shore.

B produced all seven species.

28 species ident by author = 4 families

Nototheniidae	} greater part of Nototheniiform group of the <u>Percoidae</u>
Harpagiferidae	
Bathylacromiidae	
Chaenichthyidae	

Zoarcoidea

Muraenolepididae; 4 species

See Regan British Antarctic
("Terra Nova") Exped. Rep.
Zool. I (1): 1-54 ~~pp~~ 1914.

Waite, E.R. Fishes.

Sci. Repts Australas. Antark.
Exped. ser. C. 3(1): 1-92

"I can imagine no more productive means of coastal exploration in Antarctica than to give such a ship a free hand for the whole summer season. A voyage in an icebreaker is certainly a stimulating affair."

Algleish, David Geoffrey
"Emperor penguins"

Rookeries observed by author
at Marguerite Bay, Grahamland
1948 and on Caird Coast, 1956.

Sea Swallow" Vol. 10, 1957, p. 18-19.

Feb. '59 1 million pounds handed over. at
Wilkes Land.

Staten Id. If she, or a sister
ship, were freed from ordinary
logistic duty, fitted with a labora-
tory and a complement of scien-
tists (as Staten Id. indeed was)
and let loose along the less accessible
Antarctic Coasts from Oct to April,
with launch & helicopter as auxi-
llary aids, she could do more
valuable work in that time than
any static wintering party
could accomplish in a whole year.

Sir Raymond Priestley in The

Polar Record, Vol. 10, No. 64,
January 1960, p. p~~14~~ 15.

"Antarctic Exploration Yesterday
and Today"
1908 to 1958 (Doc Freeze IV)

British Graham Land Exped 1934-37
Marguerite Bay | Southern Base on
Barryland

G. Land south side Drake Strait, directly S. of
Cape Horn. G.L. has left practically ^{untouched} unex-
plored, mainly because of difficulty caused by
heavy pack-ice in reaching coast by ship.
(See Filchner 1912)

North of 65° Coast is readily accessible
well known to sealers & whalers for many years

Only 2 ships have penetrated inside Biscoe Ids.
Charcot "Pourquoi Pas?" 1908

Discovery II, in 1931.

Port Lockroy is a harbor discovered by
Charcot 1904

No place on mainland for a base; coast fringed
with narrow belt of glaciers - ice wall 60-120
feet high unbroken for mile after mile.

Found a good place on Argentine Ids (named by Dr. Charcot) 40 miles south of Port
Lockroy, and within 300 yds of place
which we chose for our base site, there was
a sheltered cove making an excellent
harbor for the Penola. (2 storey Blds.) ^{22x} 15½ ft.
(90 seals killed & stored in ice cave for winter.

Geogr. Journal Vol. 91 No. 4, Apr. 1938
Brit. Graham Ld. Exped. 1934-37. May 1930
J. R. Rymill (before Soc.)
Nov. 4, 1937.

"¹¹Antarctica News bulletin pub. by
New Zealand Antarctic Soc.

Vol. 3, No. 2 June 1962 Art. by Bernard Stonehouse
Colonies of Adelie on Graham land

Cape Royds colony most southerly

Scotts Fresh water pools among the cinder slopes.
"many instructive samples of inverte-
brate life"

p. 57 1963 will study primitive plant life at Cape Adare

p. 58 → Univ. Canterbury Cape Crozier plankton
r sea bottom sampling.
Erebus 12,450 (u.s.) Ross had (1851) 12,400 feet.

p. 60 '63 Plans u.s. E.A. McDonald. 70 lb. meteorite

p. 82 Brit. Antarctic Survey =
Wiencke Id.

Port Lockroy closed down after 18 yrs.

Moulded plastic non-magnetic huts
(30 ft. snow over old huts)
connected by tunnels.

Graham Land (Stonington Id - Fossil Bliss)

Dion Id. only 4th rookery Emperor

Penguins then known, discovered in 1948

Vol. 3, No. 1 Permanent Biol. Stat. ^{to be} at Cape Royds
for Univ. Canterbury

p. 458 Penguins sleeping with toes raised (photo)
Feb. 12, 61 rescued 4 men McDonald. (east coast)

Vol. 2, No. 8 Argentine excursion. Dec. 1960.

p. 329

Sept '60 Vol. 2 No. 7 p. 270. Seals (Crab eater, Lobodon carcinophages)
Gaem e Caughley in Thylor Bay Valley, natural dispersal

See. W.F. Blair 1950 Evolution 4, 253-75 1934-37 Sci. Rep
Bertram, G.C.L. Biol. Seals Br. Graham Land, Exped

+ Pove. Sect. N. Z. Ant. Soc. P.O. Box 2110 Wellington.
Science 130 (3377: 716) [1:1-39]

The Antarctic Problem by
E. W. Hunter Christie (An Historical
and Political Study) London
Geo Allen & Unwin Ltd., Ruskin
House Museum Street, 1951

(Argentine Ids. (40 miles south of Pt. Lockroy)
Lockroy was not considered suitable
Second Base put on Barry Id.

Q. 234 final

An example of the inutility of aircraft alone,
is to be found in ~~the~~ "Operation High-jump",
Admiral Byrd's latest Antarctic expedition.
Literally, thousands of aerial photographs
were taken, but it is said that owing to
the absence of ground control, no one
knows what they depict.

Q. 236 "The
(Byrd's) hurried evacuation of the base meant
that valuable equipment, including the scientific
specimens and most of the men's personal luggage,
had to be left behind... (dogs were shot)
Much of the equipment and the scientific specimens
were later removed by the Argentine naval transport
10 de Mayo and by Chilean warships, what
remained was put in order and carefully stored
by a British expedition which arrived in 1945

East Base

and was afterwards used ^{when} ~~by~~ Finn Ronne
led his own expedition to the Antarctic
in 1947. Some of the scientific collec-
tions were later recovered from the
Museo de Ciencias Naturales at
Buenos Aires, and have now reached
the United States.

p. 241 Commander Finn Ronne's expedition has successfully relieved during the summer by two ice breakers, units of a United States Naval Task Force engaged in "Operation Windmill", the greater part of whose activities were concerned on the other side of the Continent.

p. 256 Ronne cooperated with English ^{they} + worked together, "thus achieving more than either could have done independently." (Base E where Port of Beaumont ^{Texas} was lying)

Antarctica Vol. 2 No. 6, June 1960

E.C. Youngs art. p. 225 on Cape Royds ~~Mount~~
p. 170 Av. snowfall in Antarctica 5 inches a year

^{Sept. 1959}
Vol. 2 No 3 Khar'kovchuk tractors

Russian. 30 ft. long 13 wide

12 cylinder Diesel, 28 miles per hour.

Lichen Forest.

p. 107. \$2,000 N.S.F. McMurdo Biol. Sta.

Ajalmar, Broch. Benthonic Problems in
Antarctic & Arctic Waters

Sci. Results of the Norwegian Antarctic
Expeditions 1927-28. Vol. 3. No. 38,
1961, 32 p. [Det Norske Videnskaps-
Akademi i Oslo]

Richard Gordon,
Miller, N. 2. Journ. Science.

(in Polar
Record
Vol. 11 No. 71
May 62)

Neotomid fishes from Cape
Adelie & Ross Sea.

~~N. 2~~ Vol. 4 No. 3, 1961, p. 664-68
Syst. List 7 fishes.

Nature: Vol. 188, No. 4752, 1960

Microbiology of some soils from
Eliz. Flint + J.D. Stout Antarctica

Photos Antarctic Sea Bottom

Also Nature
Vol. 184, 1959
p. 422-23

J.S. Ballivan. Polar Record Vol. 10 No.

68, May 61.

Filter Feeders - deep level shelf in
Ross Sea. at 200-300 fms.

L. E. Richdale, A population study
of Penguins, Oxford, Clarendon
Press 1957. [The surveys of ^{the} ~~the~~ ^{species of} ~~the~~ ^{penguins under North}

do Sexual Behaviour in Penguins
Univ. Kansas Press, 1951

It is an absolute necessity that one should
become familiar, or perhaps better, intimate
with an organism, so that he knows it in some-
what the same way that he knows a person, be-
fore he can hope to get even an approxima-
tion of the truth regarding its behaviour."
(Pearl in Russell, 1938:17).

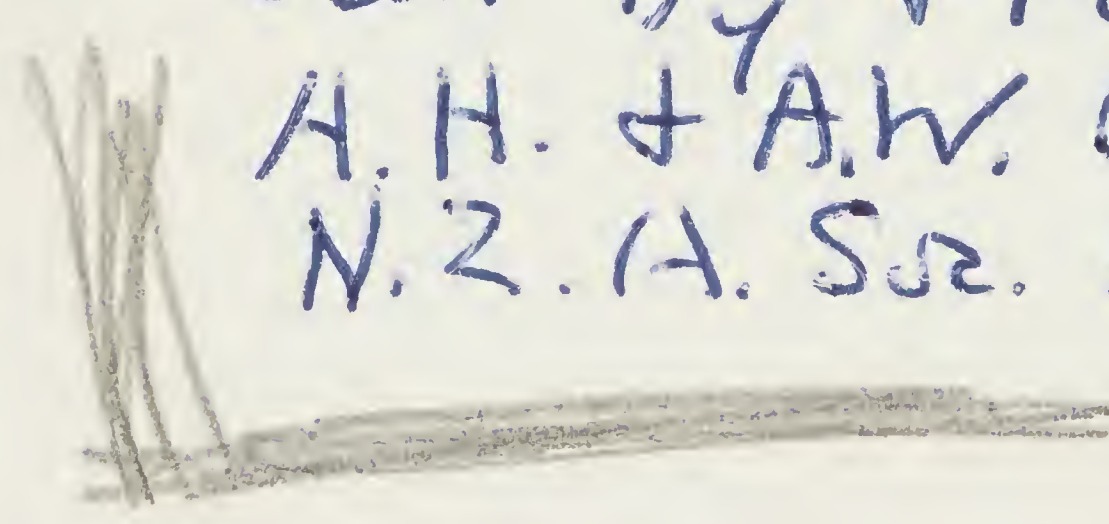
E. S. Russell. 1938. The behaviour of animals.
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of the British Graham Land Expedition.
1934-1937 John Rymil

The Travel Book Club, 111 Charing Cross
London, W.C. 2, 1939 edit.

The Antarctic Today. A midcentury
Survey by the N.Z. Antarctic Soc.
edit by Frank A. Simpson.

H. H. & A. W. Reed in conjunction with the
N.Z. A. Soc. 1952.



Argentina Geol. 1 Juan Oberha
 2 Camacho
 3 Bordone
 4 Geol. Botto Carr
 1960

- Baird, Antarctic Survey
- 1 Fossil Penguin Sledgeham
 - 2 Upper cretaceous Graham Land
 - 3 Pelutorn of Graham Land
 - 4 " "
 - 5 " "
 - 6 Ammonites of Graham Land
 - 7 Geol. South Shetland
King George Id
 - 8 " " Scepter Id
 - 9 Anders Id Geol

Chile Juan Bruggen
 Bibliography

SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM
WASHINGTON 25, D. C.

Whalers Bay

Feb. 12, 13.

Deception Id.

This place has most everything building sites with plenty of ^{flat} land water melt water streams and built in available source of heat, but could be tapped, I believe, and perhaps without too much difficulty. ^{steam power} There is a well of 65° F water at hand.

Also small boat facilities could easily be installed, likewise air ~~facilities~~ ^{be or} strips.

~~Insert from p. 2~~

From about the ~~same~~ whaling station ^{here}.

~~Regrettably our stay was due to the Navy's desire.~~ In our brief stay here a little shore collecting was accomplished. Mosses were gathered and Berlosed, ^{but} ~~due to the Navy's being seemingly in haste to get to Yankee Harbor, a dredge haul was not consummated.~~ Marine work Dredging within the Harbor probably would be difficult because of wreckage, bones and misc. trash ~~at~~ and iron junk littering the bottom. For the whaling days littering the bottom. But surely in the vicinity and probably else

but we did not get at the rich
lichen thicket on the far side of
the entrance to ~~this~~ the Port.

Where within Port Foster there is much ^{in the way} marine life to be had, if the Fish Trap returns mean anything.

Thirty five five were found in the traps when lifted on the morning of the 13th Feb ranging from 11 to 21 inch in length, the greater number ~~for~~ 17 were 13" in length and 7 ~~blunders~~ above 16 inches ~~in~~ long

Insert in Q.1

If any one wishes to ^{live with and make an intimate} study of Chin strap penguins I should say that this is the place. ~~I believe there seems to be ample room in the British Base and highly attractive~~ ^{space might be found at} ~~here which has accommodation for 14 but a resident~~ ^{for a number of} ~~well short of that number~~, so that an applicant observers, or guest researcher could probably ~~be taken care in with out~~ ~~at difficulty~~

There ~~must be~~ ^{are in excess of} ~~close to~~ 300,000 chin strap penguins ^{on this small island crater rim} here, by both British and Chilean estimates, of which better than

~~99%~~
 98% are Chinstraps mostly living on the outer rim of the crater, a few small chinstrap colonies have settled on the inner rim. ~~Perhaps~~ ^{about} 1% of the penguins here are gentoos and there are also a few macarmies and Adelines about.

What ~~was~~ ^{is} picturesquely described as during parties of Gentoos. ~~Adelines single or~~ unattached Adelines may accompany the ~~Gen~~ ^{among} the Gentoos tourists. Single Adelines have been noted. ~~A few~~ ^{A small colony of} macarmies penguins have been is located on the outer side of the N. ~~E~~ ^{shore} outer slope of the crater.

As regards ~~laboratory facilities and living quarters~~ ^{over} referred to. Aside from the British Base hut ~~there~~ are some very large, rusty iron or steel outbks ~~down~~ ^{near} by the shore by the old whaling station one or two have had doorways cut into them and are used by the British as store house

Other birds are not hatching: There are numerous Cape Pigeon ~~but these~~ here most of the year except between August 11, ~~at~~ Sept. 8; ^{March} The Dominican gull is common but not resident, but there are blue eyed shags, snow petrels, ^{8 hour No pills} ~~shags~~ & Wilson's ^{shags} petrels to be seen all times and blue eyed shags, and swallow-tailed (or Anturcho) terns, ~~to be seen most~~ of the time listed in ^{late 1962} Falkland Islands Dependencies Scientific reports available at Base B.

The Giant Petrel is about the year round.

There are several unused ones that could readily be converted in to residence and laboratory facilities by ~~cork~~ cutting doors + ports, corking lining them (as is the Staten Island) and putting in a couple of floors. They are close to sea water, and melt water steams, as well as the ~~steaming sand~~ ^{beach} ~~covered~~ covered at ~~low~~ ^{high} tide from which clouds of steam arise ~~at low tide~~ when uncovered at low tide. ~~Good~~ ~~morings~~ could be installed for

Stenmic

Notes

Notes with acct

Notes on Area A - very good biologically, very well known, accessible only by small boat or possibly in ice cap. Potters Cove

Area B. Roze Bay - good biologically
well known. Fairly accessible, some
what limited with small boat.
% storage - but strong

Area C Sand Hill Id. not much open
water.

Area D. de Gorlache Strait. Two main sites
off shore from Videla. Arthur Abbr.
On vers, Melichamp

Good ~~at~~ from Arthur Abbr.
Needs further investigation =

Area E. Grand: dar. Channel not too promising
needs a look.

11. F. Murin Bardel Bay Not too promising

4. B. Adelaide Pd OK for a/c

Need In 2nd study of report. OK for

must contain to consider marine
biology possibilities as well as land
flora and fauna.

30 XII. 62

Dear ~~Bob~~ Ra gotzkie and Linkens Greetings!

It's a bit late to wish you a Happy New Year but the thought goes out to you both. I did not get the chance to see you again or the Lakes as I had hoped because after the "fire" all flights were cancelled — hope you did get back to Base for Christmas.

There is one question I wished to ask of you folks, especially in the light of your ^{extended} ^{biological} residence with well equipped laboratories carrying on as varied lines of research as are being supported at McMurdo. Is there anything in the way of "heavy" or permanent equipment yet needed — some that you missed or might have expected to find at McMurdo? I shall be asked to tell of my visit to McMurdo, even though

it was but incidental to the Palmer Peninsula trip. A suggestion in Washington might help Dr. Wohlschlag provide it for the investigators or even yourselves another year. Will you be "buttoning" up your lake studies this year? If not do go back again. I like the way you ^{are} ~~are~~ going at things, and certainly would appreciate a copy of the report you turn in to the Program office or may publish elsewhere.

Whatever you can suggest or recommend as to needed laboratory "gear" or supplies I'd be happy to receive. You can ~~use~~ use the enclosed franked envelope for reply; it needs no postage if dropped into the McMurdo P.O. or any where in U.S. Territory.

Kindest regards to you both,
happy landings - all at home -

Sincerely

Walter S. Schmitt

Possible or tentative allotment of remaining time | 1 day's steaming Feb 21

Brialmont Cove, Alcock Id 1 day 22

Charcot Bay 1 23

Huron Bay $\frac{1}{2}$ 24

Peninsula, rest of including Roquemare $\frac{1}{2}$ 25

King George Id 1 day's steaming 26

Admiralty Bay 1 27

King George Bay 1 28

Penguin Island 1 Mar. 1

Collins Harbor 1 2

Potter Cove 1 3

Nelson Island 1 4

Euphausiids — From H.O. pilot. 12 ~~12~~ days, if you spend 6 days at King George Island; still leaves

normally confined to zone south of 30° C isotherm

Distr. within zone not uniform

The concentration of krill in some longitudes and comparative

scarcity in others is dependent upon the local hydrological conditions

Krill drifts passively with the currents as do the diatoms on which the Euphausiids feed

scarcity in others is dependent upon the local hydrological conditions

Krill drifts passively with the currents as do the diatoms on which the Euphausiids feed

2 ~~12~~ for bad weather or what not.

Why would not distrib. of Crab eater seals coincide with distrib. of Krill?

Smooth copy of
this L. J. J. Feb. 20/63
evening

(A)

Lt. A. R. Nash Eng. Bar Yards + Dock
Below from letter to Tyre ~~|||||~~ E. C. U.S.N.

Alternate sites in Lewtan Rept.
Future ^{as} envisioned 30 biologists.

Building program to cover 3 yrs.

6 biologist to winter over 1st yr.

||||| Facilities for female scientists
in second yr. ^{all more reason}
^{or Russian or Bahri style for sep. rooms}
assembling building on side
pre fab buildings depend on
reach conditions

N.S.F. will provide all ^{equipment} ~~see~~
Flush Toilets will be provided
Sea water conversion.

Sta to endure 15 years: re
location not contemplated

35-40 ft Launch + 2-3 small
boats with out-bds to be hauled out.
Air support will be minimum like Fish B.
support of remote field parties not ^{contem}plated

③

- Minimum of ² for acres
buildings 500 ft apart,

Type Sled mounted
" Prefabricated

end of notes on ~~Type~~ letter

What are desiderata - criteria

Things I would like to
pick up at McMurdo for
Edisto trip: (

3-4 fish traps, line, buoys
and weights (sinker)

2 down nets

3-4 1lb bottles formalin

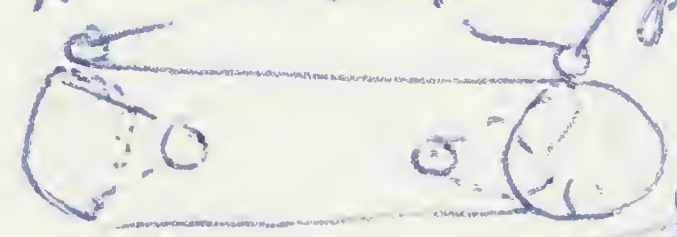
1 bottle (1lb) Hexamine
(used to neutralize formalin)

couple dozen vials

" doz. bottles for downer
samples and or bottom
samples

Geological hammer

Game bag or similar with
shoulder strap.

Are any ^{small} reach-type traps
about  for
small "things".

type fish traps
will be made up
for me
particular

phired in for bottom

Tooth paste ←

~~Pants hanger~~

Scotch Tape ←

cloth tape

Thermometer ←

Detergent.

Jan 1, 1963

Training program for Scientists

Dec. 16 /

in Time Mag?

The dedicated & the alert and or curious about sci. & sci careers will get them anyway, but the opportunist & easy come easy go will get on the 4.7 billion band wagon so will the unin. how did they train the Ph.Ds before Santa Claus (rote buying)? Kennedy arrived on the scene?

servant ^{#3} ~~fuel easily~~ ice, wind weather ^{below}

- ① Accessibility ^{by sea} landings ^{by stair} water
^{Leave of absence} involves evacuation of sick or injured ^(dead?)

- ② Small boat shelter, and facilities for hauling out

- ③ Both foregoing involve ice conditions, wind and weather

- ④ Water supply, take if possible or possibility of creating one, involves presence of natural streams flowing in summer time, ^{pure and undisturbed salt water for trace elements etc.}

- ⑤ Housing site, and room for expansion, ^{Variety of environment, shore + adjacent sea bottom}

- ⑥ Various marine environments within reasonably convenient reach, shoal as well as deep water. Varied bottom types sand mud, rock, algal (not too uniform as entire "bay" or harbor volcanic sand)

- ⑦ Varied land environments, ^(crop series) animal colonies, lichen - growth, "swampy" areas, "dry" valley, ponds and or lakes ^{to head} watch for opportunity to explore coast behind weather sea

Martin
Scott

Holdgate

Shirley

Granted by the State for
living for more than a year
of health. I have a series of papers
to get in course, will illustrate

1924
10/13

Copy
Charcoal in
caneer with
doming

Pilot operation of
~~the~~ a vessel, at least
for a full summer
along the suggested
base line —

The specialist lined
up for the various ani-
mal groups ~~for the~~ for the
El Panin ~~collecting~~ material
could work in this
undoubtedly lesser (in
bulk material) without
much trouble, ~~at~~ with
some encouragement in
the way of honoraria this
should be a matter of
plain sailing. Crustacea
worms, and echinoderms
Also we can handle in Nat. Mus.
also if El Panin group cannot.

My experience
at sea on
vessels of various
size and degree
inclining me
a floating
laboratory

Floating Lab. experimental
vessel for freezing in freezing
a vessel would be it seems
a ^{subject} worthy of investigation. What
do we know about physics
mechanics, ^{forces encountered} and construction of
is over wintering in Arctic and
Antarctic ice / What about pres-
sure ice.

Quote Sir Raymond Priestly. re
ice breaker, my hope would be
for an extension of same to
specially designed vessel.

Certainly, if after a time you want
to pick up and go you can

Get > Picture of Russian Ice Breaker sitting on ice
in some Navy Publication.

2 vessels (boats) trawler, + 30 footer
but with experienced ice navigators (captains)
New England, Maine, Nova Scotia, Labrador. ?
Burlett type

Dear Bob

In talking over our Palmer
land expectations with Tom Berg we
came to the conclusion that it might be
more behovee

for the almostly dollar and
chance to ~~unbored~~ students
Assistant on basis of
working hours reaches
The put ~~get~~ ^{high grade} ~~appear~~
inspective of this. application
(and as does not become an
appear unbred (of inbreeding)
Say what you want professor
not being profit by, and it
other than there own teaching
either not an exchange of
of land

Take not stock in can-
ger professors those who
want place (get rid of
students) are not particularly
interested in project perse.
(at least in summer) If
here would make it his per-
endeavour.

Univ. should be agreeable
get overhead and prestige

Present system may result
in getting not best men because
any ^{app}licant in field that should
be investigating gets grant
where better man might be
persuaded (for science sake)
to get job or (has for science
sake disappeared among Univ.
prof (not preeminently researchers)

Vessel of less draft.
could scout out
all areas visit and
land parties on
place which it was
not safe to approach
in so large a vessel
as the Staten Id.

Arthur Abr. Jan. 22 - 25th/63

Jean Charcot, besides being
a great gentleman, was a
great philosopher: he said
(realizing that it was an ad-
vantage that each man should
have a cabin or some such
place to shut himself in): "
It is often more difficult to
bear the daily pinpricks than
the great gre~~ets~~^{ets}."

2nd paragraph, page 101,
in Admiral Lor Montevans',
a Man against the Desolate
Antarctic New York. Wilfred
Fuhle, Inc. 1951.

Charcot was in Antarctica in
1908 - 1910. Pourquoi Pas //

Ice-breaker type - floating lab that
could be frozen in would be better for
over wintering than shore base

(Fram) (Jeanette = 3 yrs)

Nuclear sub for under ice work & study of
under surface, study of bottom, dredging & setting
nets

Greatest problem or problems
of shore station are
are:

Pollution: disposal of waste
trash, burnable

metal, hydraulic press

honey, buckets (Steel drums)

Uncontaminated Sea water
trace elements

← Supply, Fuel most important
as it involves

utilities, generators

@ for present ^{use} @ for future

expansion

water: f.w., salt.

← Housing laboratory; quarters
for personnel; storage

"Movability", expansion of facility
location (main base; subsec-
ary ones)

Deeper sea collecting; shallow
water; availability of small
boats.

① Sea work vessel

Accessibility

water studies


+ summer "

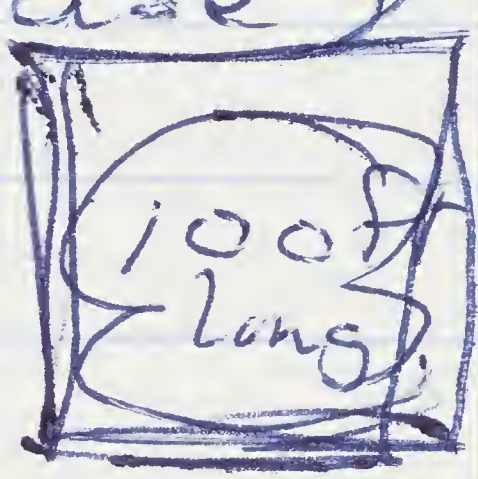
available

No navy personnel


(for
Palmer)

Larger ships. Small dragger
Survives wintering, solves pol-
lution problem


 Pauler Id ~~great~~ great
place for air plane work &
landing.

Auxiliary to land Base
Grevassy (Smechasse) 
5 or 6 \$1000 a day
wind generators

Dory out board
in well

 Air service; important, vs Navy

Check White Bear R.
P. 125

Arthur H.  Sea elephants
Chin strap + storm Petrel

"COMMITTEE OF 190"
10 COLUMBUS CIRCLE
NEW YORK 19, N.Y.

Is every one
and hurry
to have any
back at
not clear just
what U.S. P.R.P.
wants to
accomplish
inland and
music
you can't
do it
all

Waldo L. Schmitt
U. S. National Museum
Wash. 25, D.C.



Floating, sea going lab.
capable of freezing in
if practicable, could then
work full year round,
in any place desired
^{support} personnel during freezing
period could be less
than when active, or
on move.

Diesel electric drive.

All facilities aboard

[If we are going to do
a Thoro job, biologically
~~should devote a~~ not do
less than year round
study of animal and
plant life in any given
or selected area

A.P. Crary

Chief Scientist

Office of Antarctic Programs

on p. 1

I

September 12, 1961

(revisions 9/25/61, 11/15/61)

Projected Antarctic Science Program

Introduction

pp. 19-24
incl. 13

in all including

on last 6 pp.

24

pp and ~~six~~ diagrams
of status of and anticipated
work in Antarctica

Crary memo

2 sep aspects: ^(a) knowledge of Antarctica ^(II)
characteristics &

[This would cover
biol. survey]

(Food habits man or
stuff on job all time)

① exploitation of his know-
ledge for future sci.
& national requirements

Under first heading can be included most
of past and present antarctic work:

regional geology

ice surface ~~and~~ elevations

ice thickness

≡ descriptive biology

meteorological observations, etc.

The second category, though it has
been done concurrently with the first,
deals with more basic objectives such
as the geological and biological history
of Antarctica and the role of the
continent in the heat budget of the south-
ern hemisphere.

Each of these aspects is important

Scientifically the long range objective
is the utilizing of the uniqueness or
simplicity of Antarctica to solve research
problems ^(What are they?) in basic science which are
world-wide in scope and that could not
be solved as easily elsewhere <sup>(What means
by easily)</sup>

Wile Lih

2nd para. p. 3

4 The first need is in the field of taxonomy and systematics the classification and description of the flora + fauna, not only of Antarctica but also of the many islands of the high southern latitudes and even the southern mainlands of other continents. [Take in all possible territory] ^{sounds} well =

Along with this description should go ecological studies of the environmental and climatic factors under which the flora + fauna live, and the ecological tolerance ^{what means} of these organisms to Antarctic cold, which have important implications to human biological adaptation.

11 The waters surrounding Antarctica with varying degrees of ice cover, have been said to contain one of the richest and least known biota in the world."

(TV)

If we ampile (collate) existing collections get out handbooks keys (illustrated) and check lists we can make progress // When "basic" is talked about, I ask you what can be more basic than the identity and the easy recognition of the organic life with which you have to deal which you encounter from day to day and upon which all other biological research, of whatever nature or discipline is predicated or based.

Last paragraph p. 3 and ~~on top~~
~~on top~~ of page 4. (I)

The divisions of marine biology are so endless that it seems futile to attempt to sum up even the more obvious problems. Studies of whales, involved directly in a large and growing commercial interest, have received considerable attention, mainly from the work of the Discovery Committee, although much future work can be done particularly aboard whaling ships. However, other marine vertebrate fauna: the seals and fish of southern waters; and the marine invertebrate fauna, plankton communities, and microbiological organisms have had less attention. ~~The~~ end of p. 31 neglect of this branch of science in Antarctica is reflected in the two primary requirements: the ac-

to of p. 4

I'd say "study" VI

acquisition of adequate research
collections for U.S. national
collections, and the systematic
monographing of the material
last biol. para. p. 4 not copied

Under Oceanography (Physical)
p. 13 of folder, (2nd page of
Oceanog.)

It would appear that operation
from an ice floe, such as has been
done so extensively in the Arctic,
would never be utilized to any great
~~extent~~ degree in the Antarctic. The arctic
ice, being contained in the Arctic
basin, maintains its general aspect
throughout the year while the antarctic
ice, free for unlimited expansion to
the north, would be more hazardous
to work from, except in local
areas such as the Weddell Sea. In

any event, such programs would require the constant availability of outboard rescue facilities, and the type of oceanographic work would be quite limited because of logistic restrictions. Operations from Department of Defense ships in general are difficult because of space limitations and primary occupation with other duties, and, with the present emphasis on oceanography in the United States today, it is doubtful if highly-qualified scientific groups could ever be assembled aboard an ice breaker. This applies to some degree also to operations on a submarine, though here the problem, such as water circulation and character of biological life under ice shelves, are so unique that they would be seriously considered if the out-

look is favorable for the use of a submarine in Antarctic waters. The remaining possibility, that of the research vessel operating with an ice breaker, would open additional areas for research but these would not represent more than a small fraction of the ice-covered areas. The problem, therefore, is narrowed down to the use of icebreakers, or other ships built to work inside the ice pack. Ways and means of ~~increasing~~ ^{increasing} scientific operations from icebreakers by improved facilities and opportunities, should be seriously considered.

P. 18 ... and to some extent
 the biology and geology programs
 have certain basic descriptive
 aims that can be scheduled.

However, any attempt to set
 down specific plans for basic
 research studies, utilizing the
 knowledge currently being gained
 of the continent, not only would
 be unrealistic, but could ~~be~~
 easily be detrimental to the
 main goal. To be effective,
 a basic science program must be
 a dynamic one, ? lot of people
 with annual ad- busy at a lot of
 ditions ~~and~~, dele. dis. projects?

tions and modifications from
 any set plan in order that any
 new opportunities that arise can
 be exploited without delay.
 The estimates given below should

There fore, be considered accordingly. The table gives the estimated numbers of scientists exclusive of work on the Ellsworth or other ships; operations at Wilkes, Ellsworth, and foreign stations, and work outside the Antarctic areas.

	Projected Est. of Total Nos. of Scientists			
	Mc.M. Byrd	Pole	Hallett	
1962-63 Summer	80	30	10	10
1963 Winter	6	8	12	8
1963-64 Summer	70	20	15	12
1964 Winter	6	8	16	6
1964-65 Summer	50	18	18	12
1965 Winter	6	8	16	6

	Ellsworth Land	Palmer Peninsula	Total
1962-63 Summer	4	5	139
1963 Winter	6	4	44
1963-64 Summer	10	20	147
1964 Winter	6	6	48
1964-65 Summer	10	45	153
1965 Winter	6	6	48
Extension past last two listed time periods would continue at that level of operations size & carry			

Re page (X) Estimated no.
of scientists based on flow of
applications = Not on work
to be done, can be as diverse
as metabolism of fishes
endurance of bacteria, tagging
of penguins, composition of
soils and their microbiology

Last thing ~~that~~ will be thought
of will be census of animal ^{populations}
populations, kinds number
and dist may not be basic
science but it is certainly
basic to all biological science
that you can conceive of
being carried on out new
lab.

Biological Considerations:

2

Variety of ~~deep~~ environments

Marine: varied shore lines
(beaches etc) sand, shingle
rocks,

bottom types, sand
mud, algal covered, rock,
volcanic ash (latter is wide
spread, too uniform.

Fresh water: lakes, ponds,
catchment puddles or
basins under rocks
or rock and shingle giles

Terrestrial: dry valleys

~~various~~ various outcrops,
ice and snow fields.

Organic life, plant and animal
microbiological (soil, snow,
water, ice.
marine, fresh water, terrestrial
bird colonies; seal haul outs

Watch for opportunities to explore
coast behind Weddell Sea.

Physical - practical considerations

Accessibility: ice, wind, weather
fuel supply ^{very} important
fears of absence
of university people
evacuation of emer-
gency cases

Small boat shelter; facilities
for hauling out; ice wind and weather

Water supply freshwater ^(summer time) streams
and lake; dams
to create lake im-
permanent.
Pure salt water
uncontaminated
for Lab Use

Housing site: room for future
expansion

Opportunity for trash disposal
to avoid pollution of area

4

All these things require personnel, building, installations of considerable ^{size} or to be expanded in future.

disposal of wastes at some distance from base or buildings, and some service personnel if professionals do not ^{sacrifice} ~~devote~~ research time to chores.

All these things are best cared for on or with a floating laboratory. Everything is at hand including service personnel so wonderfully lacking about at least biolabs to day.

~~Utilities~~ are at hand; generally fuel to run them.

Built for over-wintering
~~at the same time~~

5
certainly ~~the~~ problems, con-
fronting ~~a~~ shore maintenance
and operations ^{during winter months} are solved

would it be possible to have
a hatch in bottom of ~~each~~
a ship (and or ice breaker)
for ice hole observations
(operations)

It is true but how does
cost of maintaining
shore station, and supply
it with fuel, equipment,
supplies compare

Could be reasonably small
and professional staff
would be better housed
and able to do more and
better work ~~than~~ ^{clean up} if they
had to do own work.



Who does honey buckets
to day?

You don't need to look
for site, you've got your
house facilities, utilities
service help and years
supplies with you. Also
a vessel (floating lab) of
reasonable size could
handle one or two
small craft (30 foot)
for shore parties &
perhaps also have land-
ing deck for helicopter.
Think of revenue cutter
after deck for dredge
too. or from smaller
boat

However, should be able
to dredge at 600-700
fms.

17

Snow melt even in most carefully selected site & mine, when you got to bottom of melter had and amazing lot of filth & trash and dog dirt in ~~it~~. You wondered where it all came from.

Ship would take care of most of it. No.?

Fresh Salt water
Supply uncontaminated
and (Ede Wohlschag, no
to vary more than one
degree from ocean water
temperature,

~~RII~~
Where snow sparse thick algal growth near
shore

Like snow deposits

so seem to be the algal
growths near shore

Snow free, relatively ice
free (off ^{thick} deep) and grinding
ice ^{down} Dipnet, hand lines, dredges

Is this your plan. // The Palmerland

We have accommodations
what do you want to do?

Cart before horse

Do we want certain things
accomplished, or any ^{old kind} ^{of research} ^{undertaken} ^{whenever} ^{willy nilly}

Is it to be a free for all come
what may.

First is a thorough biology
survey for area. I believe
geol. has been pretty well
done. These are a number
of publ in geol. of
South Shetlands already

Every body runs in food habits
but how much is done about it

But even before this a digest or
series of hand book summarizing
present knowledge of what is where
(distribution → ecology if you will
and communities) food habits
and associations. Digest of food habits
needed to but what do we have

literature papers work
job but an essential
one

bibliographic
#

to environ
and to their
neighbors

The Polar Record

Vol. 11, No. 73 Jan. 1963

Ocean waves & Pack Ice

Edo Q Robin p387-393

Check list of Sub Antarctic and Antarctic Vascular Flora

S.W. Greene and D.M. Greene

Only taxa reported as native have been included in the "Check List" but species reported as aliens have been listed in the section headed "Notes on Floras."

Sub-Antarctic zone South Georgia, Prince Edward Island, Îles Crozet, Îles Kerguelen, Heard Island, Macquarie Island

Antarctic zone All land south of lat. 60° S., but including the South Sandwich Islands and Bouvetøya
[60°

Dr. Schmitt

USS STATEN ISLAND (AGB-5)
Care of Fleet Post Office
San Francisco, California

AGB5/3120
JPT:eh
17 JAN 63

USS STATEN ISLAND NOTICE 3120

From: Commanding Officer
To: Distribution List
All OOD's
Beach Group
Boat Officers

Subj: Certain Operational Requirements of Palmer Peninsula Expedition,
Deepfreeze 63.

Ref: (a) CTG 43.1 OP ORDER 1-63
(b) USS STATEN ISLAND (AGB-5) NOTICE 5300 dated 16 JAN 1963

1. Purpose. Reference (a) delineates the overall responsibilities in support of Palmer Peninsula Expedition, Deepfreeze 63. This notice sets forth the specific responsibilities and procedures for certain tasks in support of reference (b). These tasks are small boat operations, CIC operations, and communication procedures.

2. Responsibilities. The First Lieutenant shall be responsible for small boat operations. The Operations Officer who is responsible for CIC and Communications Operations, shall assist the First Lieutenant in small boat operations for maximum utilization and efficiency of such operations.

3. Procedures

(A) Small Boat Operations

1. Greenland Cruiser

a. Responsibilities

1. Survey
2. Rescue

b. Shall have right of way seaward of surfline or 50 yards from beach if no surf. (Except when salvage boat is engaged in salvage operation)

c. Capabilities

1. Radio
2. Fathometer
3. Visual Signaling

2. LCVP #1 - Salvage boat - shows "C" Flag

a. Responsibilities

1. Salvage and assistance of other boats
2. Other duties as assigned not to interfere with primary duties

b. Shall have right of way when salvaging

c. Capabilities

- (1) Light salvage gear
- (2) Radio

3. LCVP #2

a. Responsibilities

1. Land Beach Party
2. Beach survey shoreward of surfline or within 50 yards of beach if no surfline.
3. Biological collection of fish traps.
4. General utility operation

b. Shall have right of way shoreward of surfline or within 50 yards of shore line.

c. Capabilities - Radio

4. 26' motor launch - not to be used

5. Gig - not to be used

6. All boats shall obtain permission from the OOD prior to departing the ship and from the beach guard prior to leaving the beach.

7. Landings - All landings will be in accordance with current policies. No landings will be attempted in a breaking surf of 2 feet or higher, on rocky beaches, or where any other adverse condition exists which would endanger the boat or its occupants.

8. Emergency Procedures.

(a) The boats will be equipped with sufficient survival equipment, as outlined in reference (a) however every attempt must be made to save the boat if possible without endangering life. If the event a boat loses propulsion an attempt will be made to anchor as soon as possible. The standard emergency signalling procedure as per section B of this notice will be used.

B. Communication

(1) Primary communications will be by radio on following frequencies

- (a) Ship to shore - 3220 KCS
- (b) Boat Control - 3270 KCS
- (c) Both circuits will be controlled in CIC.

(2) Radio Communications will be established and maintained throughout the period that boats are operating away from the ship and/or the shore party is in the beach area. This will be accomplished in the following manner:

(a) Shore party will be furnished with a portable battery operated transmitter - receiver of the type normally used by the New Zealand Army in the field. This radio can cover both MF and HF ranges. A radioman-electronics technician will operate the shore party radio.

(b) The two LCVP's will be furnished with radios of the same nature as described above, and will be operated by a designated boat crewman.

(c) The Greenland Cruiser will use the TCS Transmitter-Receiver and will operate by a designated crewman.

(d) Designations and call signs

STATEN ISLAND
LCVP 1
LCVP 2
GREENLAND CRUISER
BEACH GROUP

STATEN ISLAND
CLAPPER 1
CLAPPER 2
CLAPPER 3
BEACH GROUP

(e) Traffic Control and Schedules

(1) All nets will be guarded continuously by STATEN ISLAND. Due to the inability of the beach group and boat crews to guard their nets on a continuous basis, the beach group and the crew operators other than Greenland Cruiser will guard their respective nets for traffic originated by STATEN ISLAND 15 minutes every hour, from the hour until 15 minutes after the hour, ie. 0000-0015, 0100-0115, ie. The Greenland Cruiser will maintain a continuous guard. Boat radio operators and beach group may originate traffic at any time. Traffic from Beach Group to the boats, or vice versa will be transmitted to STATEN ISLAND for further relay.

(f) Miscellaneous

(1) Normal radio telephone procedures will apply throughout the operation. Only designated radio operators in the beach group and in the respective boat will operate the radio.

(2) All nets will be guarded by STATEN ISLAND CIC. STATEN ISLAND CIC will be net control for all nets.

(3) TCS in CIC will be set up on ship to shore frequency 3220 KCS. TCS in radio one will be set up for boat control on 3270 KCS. RPU's will be selected and designated as usage and convenience dictate.

3 Visual signalling will be possible with Greenland Cruiser and may be possible with beach. No visual signalling is anticipated with LCVP's with the exception of flag hoists as follows:

- (a) "C" - all boats return to the ship
- (b) Pennant 1 or pennant 2 - LCVP #1 or #2 (as designated)
- (c) Pennant 3 - Greenland Cruiser
- (d) "C" preceded by boat designation pennant - That boat return to the ship.
- (e) "B" preceded by boat designation pennant - That boat proceed to the beach.
- (f) "C" preceded by boat designation pennant or beach group flag "P" indicated unit come up on radio for traffic.

4. The following are the signals for directing the movement of the boats:

Flag or blinker	Pyrotechnics	Meaning
(a) 1	1 white star	Steer straight away from ship

(b) 1 Port	1 Red Star	Steer left of line looking from boat to ship
(c) 1 Stbd	1 Green Star	Steer right of line looking from boat to ship
(d) 2	2 Green Stars	Steer straight for ship
(e) "Q"	2 Red Stars	Return to ship

The boat designator pennant will indicate the boat being addressed.

5. Signals from boat.

(a) "S" Flag - require salvage boat

(b) Red flare, gunshots, or "N" flag - I am sinking or in danger of foundering or sinking.

C. Combat Information Center

(1) General: The Combat Information Center will be the information and control center for aircraft, shore, and boat operations. Communications to and from all three will be on the bridge as well as CIC with primary control in CIC. The procedures for controlling and gathering information from each will be as follows:

(a) Ship to Shore Operations. The ship to shore communications will be set up in CIC as per section B of this notice. Portable transceivers will be used by shore personnel. Information received from shore will be recorded on a tape recorder and transferred into the CIC log.

(b) Ship to Boat Operations. All boats prior to leaving the ship will check in to net with CIC. The surface search radar will be used to track and vector the boats. It is important that a continuous position of each boat be maintained in case of reduced visibility or other emergencies.

1. The two LCV's will be primarily used for beach landings and salvage operations. Each will maintain communications by use of Portable Transceivers. CIC will keep track of each; and the landing sites of each.

2. The Greenland Cruiser will be the primary control boat. It's main function will be that of obtaining depth soundings and other hydrographic data. The boat will proceed the ship by approximately 500 yards; and will report sounding continuously. Control of the Greenland Cruiser during this period will be on the bridge. These soundings will be recorded on a large scale chart

in Combat. After anchoring the Greenland Cruiser will sound the entire circle through which the ship is able to swing on her anchor. After the ship is secure in her anchorage or haven, control of the cruiser will be passed to CIC. For the detailed survey of a desired area a positive position for the ship will be obtained by both radar and visual means. The cruiser will be vectored along set tracks and sounding passed to CIC by radio will be recorded on the chart previously set up for recording such data.

(c) Prominent objects for radar bearings will be logged and noted on chart. Information received in the areas from the boats or helos will be recorded in logs and laid out on the track on a geographic plot.

(d) On approaching the areas of investigation all means for safe navigation will be used. As much data as possible will be obtained and recorded such as by use of radar camera, current data, prominent points, etc. Positive control will be maintained of boats and helos at all times and their position and status kept current.

J. J. METSHEL

Dr. Schmidt

USSR STATE ISLAND (AGB-5)
Cape of Fleet Post Office
San Francisco, California

AGB 5300
JTC:jn
16 JAN 63

USSR STATE ISLAND NOTICE 5300

From: Commanding Officer
To: Distribution List

Subj: Polar Peninsula Survey Operations

Ref: (1) CIG 43.1 OFCUTER 1-63
(2) Preliminary Investigation Data Sheets
(3) Detailed Investigation Data Sheets

Encl: (1) Survival Equipment, Helicopters
(2) Survival Equipment, Greenland Cruiser
(3) Survival Equipment, LCVPs
(4) Survival Equipment, Campsite
(5) Survival Equipment, Individual Packs

1. Purpose

- (a) To outline expected sequence of operations for taking survey data.
- (b) To provide special instructions relevant to these operations.
- (c) To assign responsibilities for the accomplishment of the mission.

2. Objectives: In carrying out the objectives of reference (a) it is anticipated that, at each site, the following sequence of events will take place:

(a) Preliminary Investigation Data:

1. Select and approach the site.
2. Get the latest special Sea Details.
3. Set flight quarters.
4. Launch helicopters for preliminary reconnaissance of the approached and shore sites.
5. Greenland Cruiser steams ahead of ship and sends advanced track of ship for shoaling.
6. Stop ship at selected points. Take panoramic and radio scope photos.
7. Shift ship to safe haven; anchor or lie to.
8. Take panoramic and radio scope photos.

- (9) Greenland Cruise continue sounding area off ship, thence entire harbor.
- (10) Flight quarters. Recover helicopters.
- (11) Launch CH9E for aerial photography.

(b) Preliminary Evaluation:

- (1) Observers conference in Captain's Cabin.
- (2) Based on data at this point the decision will be made to either discontinue survey or commence with detailed investigation.

(c) Conduct Detailed Investigation:

- (1) Flight quarters. Launch CH31 to find suitable landing area for LCVF.
- (2) Lower LCVF. Embark Survey and Beach parties.
- (3) LCVF land Beach and Survey parties. Beach party unload survival gear, pitch tent, establish communications, and raise United States Flag.
- (4) For remainder of Detailed Investigation, boats and helicopters will be dispatched by COB in accordance schedules set up by CTG 43.1
- (5) Greenland Cruiser continue sounding of harbor.

(d) Miscellaneous Information:

- (1) Weather - Winds of gale force occur suddenly and frequently in the Palmer Peninsula Area. It might be necessary to get ship underway on short notice to prevent grounding. If time permits every effort will be made to return survey personnel, boat crews, and boats to the ship.
- (2) Recall Signals: The following ship's recall signals will be used:
 - (a) Three Short Blasts: Eizzard probable in less than (whistle) (Repeated) three hours. Commence securing equipment.
 - (b) Five Short Blasts: All hands return immediately (whistle) (Repeated) to ship or coasts.
 - (c) Seven Long Blasts: General Recall. All hands (whistle) (Repeated) return to ship immediately. Make preparations to get ship underway immediately.

(d) Signal, or other battery, in case of distress.

(e) Visual, or other flag, for rescue.

(f) Flag: Special flag, as per (1) (1).

(g) Distress signals: Personnel ashore or in boat, in distress, may use any of the following distress signals:

- (1) Three short blasts of whistle or pistol.
- (2) Flares.
- (3) SOS with radio, telephone, or flashing light.

(h) Survival equipment:

(1) Survival equipment will be stored in designated areas, and helicopters. Additionally, back packs of emergency survival gear are available for personnel who must leave ship or shore installation in the performance of their duties.

(2) Survival equipment available are listed in enclosure (1) through (5).

(3) Survival equipment is not to be used except in true life emergencies. Packs will be sealed and must be left unopened to be opened only in times of distress, injury, stranding, or other emergency circumstances. In particular, emergency rations are not to be consumed for routine needs. Box lunches will be provided, upon request by Supply Officer. Operating equipment, such as toilet paper and water, will be supplied by First Lieutenant.

(4) Survival training a matter of personal responsibility. Personnel, depending on operations ashore or detached, will use individual survival packs from First Lieutenant (1) (1) before leaving the ship. These packs are to be carried at all times in the case where a individual is working. Personnel are to return to ship immediately upon the individual's return to the ship.

(5) Personal responsibility:

(1) The Officer of the Deck will keep a log of personnel who are off the ship.

(2) The senior person in any helicopter, when on duty, will be responsible for notifying the OOD of emergency and return of all personnel under his control.

(6) Safety Precautions

(a) Stoves: One person will be awake and on watch while stoves are lighted. This is to prevent death by fire or suffocation to personnel sleeping in tents or boats. Stoves will be turned off in unattended tents.

(7) Waste Disposal

(a) All trash and garbage, paper cups, paper plates, and other waste material shall be returned to the ship by campsite personnel for disposal.

(b) The senior officer on National Science Foundation member present shall ensure compliance with the above paragraph, and shall ascertain that campsites are left in a clean, uncluttered state.

3. Duties and Responsibilities: The duties and responsibilities listed herein pertain specifically to the objectives of reference (a) and to the collection of data in reference (b) and (c). The officers assigned responsibility for the collection of data are also responsible for assigning personnel, developing the techniques for taking data, and providing all related charts, logs, photographs, traces, etc. Additionally they are responsible for consulting, coordinating, and cooperating with CTF 43, NSF, or ship's company personnel, where such action is necessary.

(a) Responsibilities for Preliminary Investigation Data Sheets
(Reference B)

Page 1	DR. SCHMITT
Page 2	LT NASH
Page 3	LT MALLOY
Page 4	LTJG HAMM
Page 5	LT NASH
Page 6	LT MALLOY
Page 7	LT NASH

(b) Responsibilities for Detailed Investigation Data Sheet

Page 8	LT NASH
Page 9	LT MALLOY
Page 10, para 2(a) & 2(b)	LTJG HAMM
Page 10, para 2(c) & 2(d)	LT NASH
Page 11	LT NASH
Page 12	LT NASH
Page 13	LT NASH

J. J. METSCHER

ENCLOSURE (1)

SURVIVAL GEAR - HELICOPTERS

1. HUL-94

2 Sleeping bags	()
3 days ration - 2 people	()
1 pistol w/clip	()
1 entrenching tool	()
1 poncho	()
1 water canteen (full)	()

2. HRS-50

5 sleeping bags	()
3 days ration - 3 people	()
2 pistols w/clip	()
1 entrenching tool	()
2 ponchos	()
3 water canteens (full)	()

ENCLOSURE (1)

ENCLOSURE (2)

SURVIVAL AND OPERATING GEAR - LCVF's

1. Boat Chests

1 marlinspike	()
1-10" crescent wrench	()
1 pair pliers	()
1 hammer	()
1 can of nails	()
1 small coil of seizing wire	()
6" of number 4 canvas	()
1 chisel	()
1 flashlight	()
1 axe	()
1 pair of rubber gloves	()
4 boxes of matches	()
1 coil of marlin (1000 feet/+)	()
2 rolls of toilet paper	()
1 first aid kit	()

2. Boat Survival Equipment

4 sleeping bags	()
1 Yukon stove and fuel can	()
1 Arctic tent and tarpulin	()
1 medical kit	()
3 blankets	()
4 sets foul-weather slickers (canvas bag)	()
1 rifle w/bandoleer	()
1 set of pyrotechnic signals	()

ENCLOSURE (2) (CONT'D)

SURVIVAL AND OPERATING GEAR - 10/7/78

2. Boat Survival Equipment (Damage)

1 15-man life raft	()
4 boxes w/1 ration	()
2 liquid cans for water (empty)	()
2 back packs	()

3. Boat Operating Equipment

1 boat log	()
1 boat cover	()
Liquid Cans	
2 for fuel oil	()
2 for prestone and water	()
1 for lube oil	()
2 anchors w/150' of 2 1/2" line each	()
1 towing bridle	()
1 sea dog w/150' of 2 1/2" line	()
50' of rubber 6 thread	()
2 deck sockets	()
1 lead line - 12 fathoms	()
1 heavy line	()
1 sled	()
1 grapple hook, chain and line	()
1 radar reflector	()
1 CO2 fire extinguisher	()
2 fenders	()
1 boat hook	()
10 life jackets	()

ENCLOSURE (2)

ENCLOSURE (3)

SURVIVAL AND OPERATING PLAN - CHINA LAKE CRUISER

1. Boat Chests

2. Boat Survival Equipment

1 life raft	()
8 life jackets	()
2 cans of water	()
2 cases of (5/1) rations	()
1 set of pyrotechnic signals	()
10 blankets	()

3. Boat Operating Equipment

1 life ring	()
1 signal light	()
1 set semaphore flags	()
1 drogue	()
2 anchors w/150' of 2 1/2" line each	()
1 boat log	()
4 sets of foul weather slickers	()
2 fenders	()
1 boat hook	()
1 grapple with chain and line	()
12 buoy markers for shadow areas	()
2 lead lines - 12 fathoms	()
1 Bravo flag	()
1 rifle w/ammunition	()
Necessary charts and plotting equip.	()

ENCLOSURE (4)

HAIR-GITE EQUIPMENT

3 tent	()
3 Yukon stove	()
boxes of 5/2 rations	()
1 tarpulin	()
1 radio	()
1 medical kit	()
4 boxes of m ^o her (waterproofed)	()
1 CO2 fire ex nguisher	()
4 water cans	()

ENCLOSURE (4)

ENCLOSURE (5)

INDIVIDUAL PACKS

1 sleeping bag	()
3 day rations	()
1 bayonet w/case	()
1 canteen w/cup	()
1 penknife	()
1 box of waterproofed matches	()
2 signal flares	()
1 mess spoon	()
1 can opener	()
toilet paper	()
1 entrenching tool	()

II. Detailed Investigation Data Sheet

A. Site

1. Name

2. Lat _____; Long _____

3. Relation to other stations _____

4. Surface materials

a.

b.

c.

5. Underlying strata material

6. Permafrost conditions

7. Core boring taken YES NO

8. Soil samples taken YES NO

9. Topo taken YES NO

10. Attached sketch and description of

a. Waste and trash disposal area YES NO

b. Antenna farm location YES NO

c. Emergency stores area YES NO

11. Natural terrain protection. Comments.

II. Detailed Investigation Data Sheet

B. Access

1. Ship

a. Protection afforded water area

b. Classification of harbor bottom

c. Attach data sheet of soundings of harbor and mooring area

d. Fuel delivery

(1) Hose from ship

(2) Drum

e. Comments on discharging cargo

f. Complete write-up of navigational hazards.

II. Detailed Investigation Data Sheet

B. Access

2. Boat ops

a. Mooring area

b. Beaching area

c. Wharf or pier potential

d. Storage and repair area

II. Detailed Investigation Data Sheet

B. Access

3. Inland

a. Transportation equipment

b. Supply storage area

(1) Size

(2) Location

(3) Comments

II. Detailed Investigation Data Sheet

B. Access

4. Air

a. Location: Heading from station _____
Distance _____ . Elevation _____

b. Surface

- (1) Snow
- (2) Ice
- (3) Soil

c. Size _____

d. Access

II. Detailed Investigation Data Sheet

C. Photo coverage

1. Station site

a. Panoramic _____

b. Vertical _____

c. High oblique _____

2. Access routes

a. Vertical _____

b. High obliques _____

3. A/C landing site

a. Vertical _____

b. Panoramic _____

c. High oblique _____

4. Ground photos of

a. Water sources 1 2 3

b. Building sites _____

c. Geological formations _____

d. Harbor _____

e. Beach _____

f. Access routes

(1) Beach to station _____

(2) Station to A/C landing area _____

For DR. Schmitt

ATTACHMENT
To 1404 Ops Order
Tf. 43.1.1

PRIMER STATION SITE

I. PRELIMINARY RECONNAISSANCE - will be made of areas revealing any potential as base sites. The preliminary data on these sites will be recorded. If favorable results are noted after preliminary reconnaissance, a detailed investigation of the region will be conducted.

A. Science Program Requirements are the primary reason for the exploration and will be the governing factors. They are, but not limited to:

1. General biology potential.
2. Geological potential.
3. Bird and animal population.
4. Density and general type flora.

B. Site Criteria in determining station site, initial factors involved are:

1. Distance from shoreline.
2. Acreage of terrain acceptable for buildings.
3. General elevation and area relief.
4. Water source in winter and summer as well as quality.

C. Access to station site area by sea is a basic requirement. Knowledge of ship and small boat logistic potential is very essential to station success.

1. Ship Logistics.

- a. Anchorage site and its distance from shoreline.
- b. Depth of anchorage and harbor area by limited soundings.
- c. General topography of shoreline and beach area.
- d. Current ice conditions.
- e. General navigational hazards.

2. Boat Logistics. General investigation of beach for mooring and launching boats.

3. Inland Logistics. Access between beach and station site.

D. Associated Data.

1. Meteorology.

- a. Upper air soundings to be taken every 12 hours.
- b. Current surface temperatures.
- c. Current surface winds.
- d. Any precipitation will be recorded.

2. Photo coverage will be given all sites visited. These will include:

- a. Panoramic from ship's bridge of shoreline.
- b. High oblique of shoreline and proposed station site.
- c. Low oblique of shoreline and proposed station site.
- d. Vertical of shoreline and proposed station site.
- e. Radar scope photo of area.

3. Location of site with respect to other stations will be noted. This will include name, nationality, description and general comments of existing station where available.

4. Possible satellite camp sites will be noted with emphasis placed on suitability for small building site and accessibility. These site notes will also include location and mooring sites of boats in area.

II. DETAILED RECONNAISSANCE OF INTERESTING SITES

A. Additional Site Criteria required.

- 1. Proposed station name, with latitude and longitude.
- 2. Type surface materials and underlying strata including soil samples and core borings where possible.
- 3. Depending on relief of area, two or five foot contours are to be taken of selected sites.
- 4. Waste and trash disposal areas.
- 5. Location of antenna farm within reasonable distance of site with proper clearance requirements.

6. Degree of protection of site by natural terrain.

7. Area where emergency stores could be located.

B. Additional Access Data.

1. Ship Logistics.

a. Soundings of harbor and mooring areas.

b. Protection afforded water area.

c. Method and capabilities of discharging cargo onto beach.

d. Classification of harbor bottom.

e. Detailed description and location of navigational hazards.

f. Accessibility for fuel delivery by:

(1) hose from ship

(2) drums

(3) other

2. Boat Logistics.

a. Beaching area sufficient for small 14 foot outboards and 40 foot inboard.

b. Suitable mooring area for 40 foot station boat.

c. Possibilities of wharf or pier.

d. Storage and repair area availability on beach.

3. Inland Logistics.

a. Type transport between beach and station.

b. Storage location of general supplies including direction from station.

4. Air Logistics. Long range program.

a. Air operations site location with respect to station.

b. Soil, or surface characteristics, this includes comments on ice and snow.

c. Size of area that is suitable for aircraft landing facility.

d. Access conditions between runway and other sites.

C. Detailed Photographic Coverage. In order to present the big picture of each site, following coverage is required:

1. Panoramic views of proposed station site and proposed aircraft landing area.

2. Vertical and high obliques of:

a. Proposed station site.

b. Proposed aircraft landing area.

c. Access routes.

3. Ground photos of:

a. Water sources.

b. Building sites.

c. Geological formations.

d. Aircraft landing area.

e. Harbors.

f. Beach.

g. Access routes.

III. REPORT OF RECONNAISSANCE.

A. Report will endeavor to give a clear account of conditions encountered at all sites visited from harbor and beach conditions at the time of visit to the extent of suitable areas for the satellite camps and aircraft landing locations.

B. Recommendations on station location, proposed layout of station, type of vehicles and equipment suitable for area, and possible types of construction will be made.

C. The report will be supplemented with:

1. Photos.

2. Samples of terra firma in area. Also an analysis to extent possible of material will be submitted.

3. Rough topo map of areas recommended as sites.

D. Soil and Geological data will be supplied primarily by Mr. Tom Berg, Geologist, United States Antarctic Research Program representative

PREPARED By LT NASIT

DR. Schmitt & Co. Py

Page 1

I. Preliminary Investigation Data Sheet

A. Science Information

1. General Biology Potential comments.

2. Geological Potential comments.

3. Population Data.

4. Flora, density and general types.

I. Preliminary Investigation Data Sheet

B. Site Data

1. Name _____
2. Location: Lat _____, Long _____
3. Distance from shoreline _____
4. Size of area available _____
5. Water source
 - a. Summer _____
 - b. Winter _____
 - c. Sample taken YES NO
6. Approximate elevation _____
7. Area relief _____
8. Comments _____

I. Preliminary Investigation Data Sheet

C. Access

1. By ship

a. Current ice conditions

b. General navigational hazards

c. Anchorage site location

d. General Topo of shoreline and beach area.

e. Harbor and anchorage area depth

I. Preliminary Investigation Data Sheet

C. Access

2. Boat handling data

a. Comments on mooring and launching sites.

I. Preliminary Investigation Data Sheet

C. Access

3. Inland

a. Comments on access between beach and station site

I. Preliminary Investigation Data Sheet

D. Associated data

1. Meteorology

- a. Attach copy of ships log concerning meteorological conditions. _____
- b. Attach copy of upper air soundings report. To be taken every 12 hours _____

I. Preliminary Investigation Data Sheet

D. Associated data

2. Photo coverage

a. Panoramic from ships bridge of shoreline _____

b. High oblique of
Shoreline _____

Proposed station site _____

c. Low oblique of
Shoreline _____

Proposed station site _____

d. Vertical of
Shoreline _____

Proposed station site _____

e. Radar scope photo of coastline _____

For DR. Schmitt

U. S. NAVAL SUPPORT FORCE, ANTARCTICA
NAVY NUMBER 531
FLEET POST OFFICE
SAN FRANCISCO, CALIFORNIA

FF3/43
31/gda
3120
Serial C-8
4 January 1963

From: Commander Task Unit 43.1.1
To: Distribution List

Subj: Commander Task Unit 43.1.1 Operation Order No. 1-63, promulgation of

1. Commander Task Unit 43.1.1 Operation Order No. 1-63 is promulgated herewith. This Operation Order is based on Commander Task Force FORTY-THREE Operation Order 1-62.

2. This Operation Order is unclassified.


PRICE LEWIS, JR.

Distribution:

Chief of Naval Operations
Commander in Chief, U. S. Atlantic Fleet
Commander in Chief, U. S. Pacific Fleet
President, Naval War College
U. S. Antarctic Projects Officer
U. S. Antarctic Research Program
U. S. Naval Attache and Attache for Air, Wellington, N.Z.
U. S. Navy Hydrographic Office
U. S. Public Health Service (AFTH: CAPT ANDERSON)
Chief, Bureau of Yards and Docks
OIC, Fleet Post Office, San Francisco
OIC, Movement Report Control Center, Washington, D. C.
OIC, Movement Report Center, Norfolk, Va.
OIC, Movement Report Center, Pearl Harbor
OIC, Movement Report Center, Balboa
OIC, Movement Report Center, San Francisco
OIC, NAVSUPPORT ANTARCTICA, Detachment ONE, Christchurch
OIC, NAVSUPPORT ANTARCTICA, Detachment TWO, Davisville

Operation Order

CTU 43.1.1. No. 1-63

U. S. Atlantic Fleet
Commander Task Force FORTY-THREE
(Commander, U. S. Naval Support Force,
Antarctica)
Advance Headquarters, Commander,
U. S. Naval Support Force, Antarctica
Navy 321, Fleet Post Office
San Francisco, California

Ref: (a) NSF ltr of 8 Nov 1962
(b) CTF-43 OPLAN 1-62

Encl: (1) Investigation Data Sheet

Task Organization

TU 43.1.1 Palmer Peninsula Unit

CDR Price Lewis, Jr., USNR

USS STATEN ISLAND (AGB-5)

CDR J. J. Metschel, USN

1. General Situation:

a. To penetrate Antarctic Sea regions in vicinity of Palmer Peninsula to perform tasks as assigned by CTF-43 OPLAN 1-62

b. The only other known U. S. units or ships operating in the area is USNS ELTANIN (T-AK-270).

c. Assumption:

(1) That Task Unit 43.1.1 will be formed on or about 5 January 1963.

(2) That CTU 43.1.1 will depart in USS STATEN ISLAND (AGB-5) for Palmer Peninsula.

(3) That ice conditions will permit penetration of Antarctic region in vicinity of Palmer Peninsula to carry out mission.

(4) That mission into Palmer Region will be accomplished by not later than 15 March 1963.

2. Mission:

a. To examine accessible coast line of Palmer Peninsula and its offlying islands between Bellingshausen Sea and the Bransfield Strait and South Shetland Islands in order to locate a suitable site for possible installation of small scientific station during DEEP FREEZE 64.

As designated by reference (a) the following areas are considered biologically interesting by National Science Foundation:

- (1) Snow Hill Island area
- (2) de Gerlache Strait area
- (3) Grandidia Channel
- (4) Marin Darbel Bay
- (5) Adelaide Island

6) South Shetland
Islands

Operation Order
CTU 43.1.1. No. 1-63

- b. To support other designated USARP scientific projects.
- c. Conduct hydrographic surveys where possible.
- d. Make oceanographic observations when conditions permit.

3. Execution:

a. Commander, Task Force FORTY THREE will:

- (1) Provide engineering assistance for site investigations, and
- (2) Photographic personnel to ensure adequate photo coverage.

b. National Science Foundation:

(1) By reference (a), Mr. John Crowell was designated National Science Foundation Senior Representative; Dr. Waldo Schmitt, biology consultant and Captain E. A. McDonald, USN (Ret) as Special Consultant.

(2) Mr. Tom Berg, geologist, has been designated to examine areas for geological importance.

c. Commander Ship Unit:

- (1) Be in charge all unit operations.
- (2) Assign helicopter support to exploration parties.
- (3) Coordinate all matters with National Science Foundation Senior Representative and Navy personnel.

d. Ship's Commanding Officer:

- (1) Provide personnel as required to support site investigations.
- (2) Furnish data as requested on enclosure (1) that falls within his sphere of task functions.
- (3) Provide ship/shore communications support for exploration parties.

4. Information of Special Interest.

a. It is the intent of Ship Unit Commander to Assist other countries with stations in the Palmer region to extent possible within limits of personnel, equipment and mission of Task Unit. This assistance might include delivery of mail, personnel, and provisions, technical assistance, evacuation of personnel, and other items emergent in nature.

Operation Order
GTU 43.1.1, No. 1-63

b. Relations with personnel of other countries in the Palmer area.

(1) Contacts between U. S. forces and foreign nationals will be initiated by Senior Representative, National Science Foundation and Commander Ship Unit 43.1.1.

(2) At all times contacts between U. S. personnel and foreign nationals will be friendly in manner, with courtesy and respect for the individuals and their work in Antarctica.

(3) The nature of the mission as a data collecting expedition, will be explained to foreign nationals. Where possible information that will aid in accomplishing the mission will be collected from foreign personnel in the area.

c. Property of other countries.

(1) Property rights of other countries will be observed by all personnel.

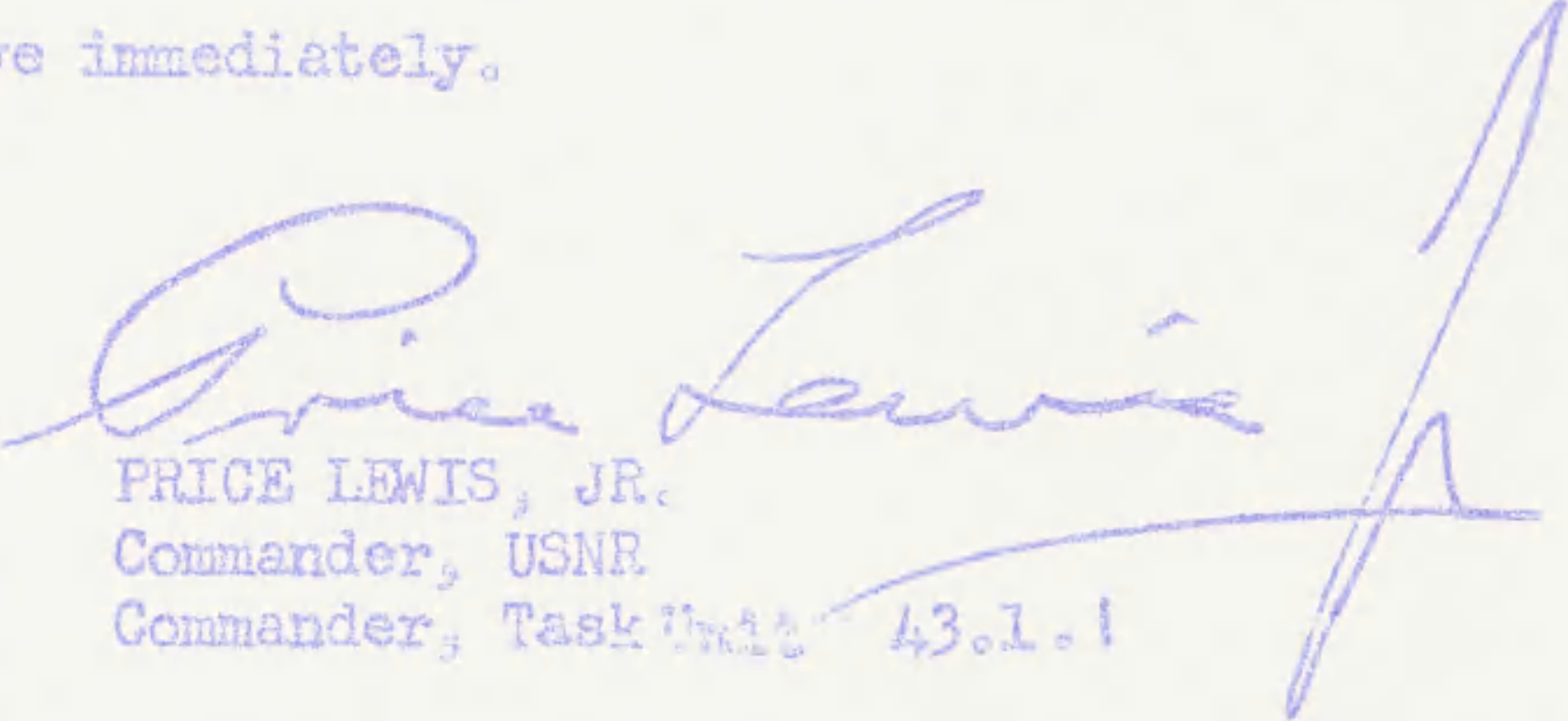
(2) The collection of souvenirs at sites presently or previously occupied by other nations is forbidden.

(3) Due care will be taken while in and around these sites. The stations will be left as found. In the event property is damaged, a report will immediately be made to Ship Unit Commander describing damage, giving location, and stating events that led to occurrence.

d. No penguin rookeries, seal colonies, or other animal inhabited areas will be disturbed. Visits to such areas will be confined to those who have requirements to do so.

e. This is the first U. S. exploration of this nature into the Palmer area. Accordingly the conduct of all personnel is to be beyond reproach during the entire exploration. This includes conduct at port of calls in South America enroute to homeport. Violations will be serious offenses and dealt with accordingly.

5. This Operation Order is effective immediately.


PRICE LEWIS, JR.
Commander, USNR
Commander, Task Unit 43.1.1

Done Dec. ⁵⁻⁶ 1962

POINTS TO BE CONSIDERED IN SITE SELECTION

- A) ACCESSIBILITY: (by surface ship
(by plane

involved in both instances are weather, wind and ice conditions; type landing areas; delivery of supplies; heavy equipment; and particularly fuel. Evacuation of emergency cases.

- B) HARBOR FACILITIES: for station bases boats.

involved are ice, wind and weather. Depth of water, currents, mooring area, anchorage, beach head, landing, suitability for construction of marine railway or similar facility for station vessel, and/or boats and for landing supplies.

- C) HOUSING SITE: room for expansion; character of site; extent of snow or ice free land.

Look for rock area on which to build

- D) WATER SUPPLY: glacial ice; permanent snow deposits (potential of each) by distillation. Fresh water lakes (summer streams).

- E) BIOLOGICAL FEATURES OF AREA:

(1) Variety and abundance (distribution) of animal and plant life.

- | | |
|----------------|--|
| a) Marine | (Bird rookeries, seal hauling ground, plant growth (lichen mosses) tests or trials with fish traps hook and line townet hauls.) Microbiological organisms. |
| b) Terrestrial | |
| c) Fresh Water | |

(2) Variety of environments.

- | | |
|-----------|---|
| a) Marine | shore, beaches, sand, rock or shingle.
<u>Bottom Types-</u> sand, mud algal covered, rock, volcanic ash. |
|-----------|---|

b) Fresh Water

lake, ponds, puddles, catchment basins, under rocks, summer streams.

c) Terrestrial

(as under Fresh Water), dry valleys, soil types in evidence, glacial moraines, outcrops of various sorts (geol. formation).

In all instances - distance from station site is an important consideration; the more of a varied environment and type of animal or plant life within easy reach (50 mile radius), the more valuable the site.

SAMPLING OF ANIMAL AND PLANT LIFE

- AT EACH SITE OR ANCHORAGE

1. After ship comes to anchor, would like 2, 3 or more traps set out between ships anchorage and shore landing in 4 or less fathoms.
- 2.a Townet haul to be made over ship's side (or stern) while ship is anchored if current is sufficiently strong to sustain net for straining water.
- b Otherwise a brief tow to be made from boat returning from shore - at which time slow speed for about 5 mins. while net is over side.
3. Hand line fishing by crew aboard ship is requested, or encouraged if men do indulge in over the side fishing (if permitted) in off duty hours.
4. Helicopter flight over site area to be examined; should cover area to spot fresh water, lakes, ponds or streams, glaciers (for possible water supply), "dry" valleys if any, bird rookeries, seal hauling grounds, stands of plant life.

If possible and practicable, samples of plant life should be obtained, as well as bird nest debris, and tow net hauls in suitable bodies of fresh water.

Work and materials needed for operations suggested above:

See "SHIP'S SERVICES AND STORES". -

SHIPS SERVICES AND STORES (REQUESTED OF)

1. a En route Palmer Land would like extra funnel (truncated cone of wire mesh or sheet metal) added or inserted opposite present one, in each 4 ft. trap. (If practicable) U.S.A.R.P. will endeavour to supply wire mesh.
 - b Bridles to be rigged on each trap for lifting same, and anchors (or heavy weights) for buoy lines; also floats and flags needed. Can be made from lumber stock on board.
 - c Lines for traps (operating in 5 fathoms or less of water, 10 to 15 fathoms line for each trap. Obtainable aboard ship?)
2. a Light line for tow nets, perhaps 3X as long as height of ship's rail above water line. Obtainable aboard ship?
 - b Rack of wood to support 3 tin funnels each with 150 watt or better light suspended above each to drive animal life in debris and plant material placed in each funnel, down into bottle under each funnel.

4. Fishing lines: Are not lines (and hooks) available aboard for recreation purposes of crew? To be furnished by U.S.A.R.P. if necessary.

{ duplication }

3. Fishing lines and hooks for hand lining over ship's side, by crew members off duty. However, it is believed that crew members have lines available for recreational purposes.

4. Supply of paper and cloth bags at least 6 x 10 inches long for soil and plant samples, and bird nest debris.

RECOMMENDATIONS

The following recommendations are put forward as a guide to the survey team who are to carry out the inspection of suitable sites in the Palmer Peninsula.

1. Biology.

As the emphasis is on the establishment of a biological station, it is suggested that: A) A complete log be kept of all bird and seal rookeries, areas rich in flora, whales and other marine life. This daily log to cover all observations both at sites inspected and whilst travelling. B) If possible a small plankton net could be used to collect samples to attest the richness of all areas. These observations could form a basis for determining the nature of future research.

2. Ice Conditions. A daily sea-ice log should be kept. If foreign bases are visited an exchange of information covering previous years ice conditions would be of interest for future planning of boat travel in the area. Reprints of maps for plotting ice conditions are available.

3. Site Assessment. It is suggested that each member of the survey group make out a standard form for recording observations similar in format to one listed on next page. This would insure coverage of all major points in determining the suitability of a site. Individuals could also add to these forms any other relevant data which they consider useful in their specific field.

For a greater part of the site inspection, helicopters will most likely be used for their speed in covering an area. This is advantageous in some respects, but any site which has future potential should be visited by boat to effect the landing conditions as this operation is primarily for the utilization of small boats in aiding marine and littoral studies.

The resupply by C130 or similar type aircraft in the future is a possibility with airfields such as "Chabunco" located north of Punta Arenas^{Chile} giving direct connections to North America. From Punta Arenas southwards to Deception Island is 650 miles, to Anvers Island 750 and to Adelaide Island 900 miles. Adelaide and Deception Island would both operate large transports with ease. It is recommended that Anvers Island be checked for this type operation as a base here would be in an excellent central position for working north and south ^{of along} the Peninsula.

Weather Forecasts

It is recommended that the Chief Meteorological Officer, Port Stanley, Falkland Islands be approached for the issue of a daily weather forecast whilst ship is operating in the area. Ships weather observations may be sent to Port Stanley for inclusion in FICOL broadcast.

Charts, maps and air photography of all areas are held by Office of Antarctic Programs. It is recommended that copies of these be furnished to the OAP-NSF Representative for use aboard whilst engaged in the site inspection.

On leaving the peninsula it is recommended, if time allows that ^a visit ^{be made} to Punta Arenas, Ushuaia, and Port Stanley, Falkland Islands to assess potential of these areas as a supply route to the peninsula.

- (A) Boat dredge Mr. Sowersby Lincoln Ellsworth
McIntosh + Gunter (Kemp)
- (B) Best site for central station where facilities of a laboratory, slipway for boats, boat store, repair shop in addition to living quarters can adequately be located.
- (A.)

Area A. South Shetlands

Site 1. Penguin Id. has penguin rookeries
 not much else

Site 2 Cape Lions Rump has elephant seals
 has foul ground and penguin rookeries

good anchorage in 20 fms in volcanic ash
 good shelter in fairly high winds.

Site 3 Kellar Peninsula

ample space for buildings
 overland travel stiff climb.

Need strong boat cooper shutted against ^{ice}.

good anchorage in Martel Inlet ^{Shetlands}.

is largest enclosed area of water in South
 was harbor for factory ships —

II Site 4 Point Thomas

much foul ground

breeding ground
 of many birds.

One of few areas
 where colonies of
 gentoo, chinstrap
 and adelia penguins
 breed in adjacent
 rookeries. and
occasional fur seal

No shelter

could visit

quite open to all
 weather, and no
 shelter or anchorage
 afforded for ships off-
 shore.

Under Area A listing sites you have
Site 5, Potters Cove on page Area A Site 5
it is given as Potter Cove, no s.

is one of best anchorages in the
South Shetlands

Deception Id
Fly-bout
6.50 miles from
Punta Arenas

Beaches of fine sand and gravel
gentle slope and ample room for
[all] operations. } Great watering area
for ships.

Varied
bottom.

Place for traps
lines gill nets
nylon.

Though shallow very good anchorage.

Bottom mud and clay

No need floating pier

Ice conditions good.

Water supply good

Beach good for large scale
helicopter operations.

Check ice plateau for ~~fish~~

Birds nest
Giant Petrel
Skua
Pomarine gull
shearbill
Wilson's Petrel
No penguins

Several S. W. lakes

(absence of penguins
an advantage)

but are over on
Pt Thomas just

— miles away
Elephant seals &
fur seals in small
numbers

Site 6 Ordley Island

at low tide can walk over to King George
Island.

Island relatively low and flat.
suitable for a/c

Fair anchorage

recommended
as a secondary
site (?)

Area A.
Side 7

No shelter

→
recommended
for possible
Central Station

Suffield Point

No shelter for ships

(Beach pebbles and sand

Mun. f.w. lakes.

Space is plenty for g/c

Good anchorage

Abundant in
Flora & Fauna

Site 8

Darmany Cove

No shelter from southerly swell

Abundant
bird life
penguin
rookeries



Half Moon Id

see Sect. III A.

Gage # D1-13-01

Area B.

Side 1
Dundee Id
Welchness
no beach

Just a piece
of good ground
for building
upon

Dundee Id
Hope Bay Ellsworth's 1935
Base of operations
Good anchorage but out in open
What about shelter

No lakes {catchment basin could be devised}

Pack ice at times clatters place makes landings difficult.

Xc. Helicopters as in } has facilities
only area with all } or snow
+ gravel

Unloading easy except when ice is in but dears with change of wind.

Bird life not abundant.

(No)
Site 2

Hope Bay, Trinity Peninsula
unusual wind conditions make parking of air craft dangerous need hangars

All labor is getting off and on shore is huge effort

Landings should be effort free easy of access and departure at all times

Rocky landing difficult except at high tide Has lakes ^{at some distance} rocky over hang with some habitation.

Ice foot which has to be removed most years Too much summer geology would need to be bulldozed to provide ramp also sloaning pierhead would ease conditions

Ships lay off at 50 fms
Steam out into Sound in gales to avoid drift ice
Ice melt few streams would have to build reservoir dam.

Area B (cont)

Site 3 Hope Bay, View Pt. Duse Bay

Difficult access in summer
rarely does ice break up.

N.G.

a/c no good because of direction
of prevailing wind

Only good in summer + for summer
stat. for which
I see no point
except a south side peninsula

Area C Snow Hill (Swirly snow free)

N.E. For land biology good marine not
Mar. res. difficult at Good^{so}

Times. very dry little water
Is. Dry area good for air craft.
Not much hot water

Area D

de Gerlache Strait
Amvers Island

excellent central
position for work
N + S. along coast.
of Palmer Peninsula

Site 1

Arthur Abr.

I

Shore free; 1/4 mile to large S.W. lake

Need floating type pier + roller tracks

Great
variety
of coll.
grounds within reach

must be
wealth of
marine life.

good a/c. all kinds.

Good central for Birds + seals.

Room for ship. way

good anchorage off shore.

1/4 mile to lake

1 mile to medians + planes

D.2 account Melchior as secondary
summer base

Difficulty in getting
shift named

see section III of report.

Kane from Gloucester
Pt. Mass.

Same old story

he ~~as~~ no one ever
has assurances shift
will be worked up

de Gerlache Strait

no a/c. Two Mess No aircraft possible, No!
landing Port Lockroy + Dorian Bay

Area F

Brandidier Channel

out for
this
reason

a accessibility, uncertain for
year to year.

also need floating pier =
lot of crab enter seals

Investigate further by helicopter
Doubt if any thing here that would not be
at. rovers (? crab enter
seals)

Area F.

Marin Darbel Bay
Not suitable, Ice bad!

out,

Area G

Adelaide Island

Agree with \pm adverse report.
Uncertain ice and thus
in margarete Bay
not so good for Flora + Fauna

out

Falklands: Karl Vernon Hellman
Greenshield
Feldons

FALKLAND ISLANDS

TIERRA DEL
FUEGO

DRAKE
P A S S A G E

60

SOUTH ORKNEY

ISLANDS

SOUTH SHETLAND ISLANDS

Area A

BRANSFIELD STRAIT

Area B

Area D

Area C

Area E

Area F

Area G

ADELAIDE IS

MARGUERITE
BAY

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CHARCOT
IS

ALEXANDER I

Palmer Peninsula

Selected Areas of interest.

- Area A. South Shetland Islands
.. B. Hope Bay
.. C. Snow Hill-Cape Longing.
.. D. de Gerlache Strait.
.. E. Grandidier Channel.
.. F. Marin Darbel Bay.
.. G. Adelaide Island.

- ① Broad wide area.
- ② Don't be influence by presence
- ③ Continuum, + new; don't
- ④ of value over long period
- ⑤ Availability for air service

Geol. physical 20
Geological 20
Biol. — — 50 yrs

①

1st year small way.

Lab. site (No. I)

Utilities = Elect - generators, fuel (easy to deliver supplies)
great quantity of fuel oil.

① Fuel system serious

Drums over tanks
Matter of delivery

Drums
Ashore

Straight collecting.

IF to be expandable
out fit

→ 3 times, anticipated
needs for elect.

Do not ask scientists to
work shore snow, or run
generator

Civilian support.

Ice cliffs (house)

melt snow
banks get exhausted
by use (mining snow)

McMurdo snow melter works best.

Thermoglass pipes

* Water supply;

Civilian support
ashore: Navy for
supply

Air People 3 year
stint; need

Dept of defense.
to arrange 3 yr.

* Find a place with ice supply close hand

Deep = lake - but not saline (test)
10 feet deep or more.

Samples of
standing water.

Biol. lab. distilled water supplied. for lab. + coffee.

* Salt water hauled in tanks; stored in containers
under aquaria

①

Biology manual; repeat instructions,

① McMurdo projects can be profitably repeated + checked by doing over

②

Transects:

Follow through seasons
} Photosynthesis under ice
} Open ice.

Vital processes

Ecology.



How thick does ice.

ice crystals
on lift rope
of traps

Barnett
Marine phytoplankton

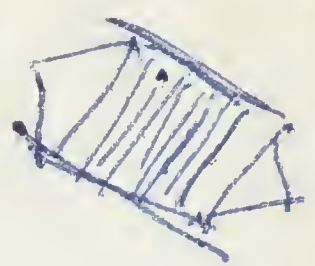
Carbon 14 cold room.

Stuff waiting for him.

Enzymes; hormones;

Manual labor

Ask for inventory + facilities, available. See Goodall ➡



Water systems water drains dam hill

⊗ Drainage!!! be sure its there.

→ Building in row following contours
End of utilities Dry-buckets of "dung" honey-buckets

Syst. coming to close.

Physiology Scholander + Irving

disappointed in medical

Wet lab.
Dry lab.

Keep scientist out of routine work.

What to look for in selecting site.
Use of small boats.

Fog?
Wind or ice cover

Spring Summer Autumn + Winter

Beaches. [Shingle gravel] rock-cobble-type, ^{rough} rocky
head lands. [Scuba diving], tide-pools,
Kelp. (resistance to freezing) Wind ex

Swampy - dry - wet.

40 miles
3-4 men

Ice-houses: (oceanographic work, ideal for)

Boats - one-man - Winch, frame for dredge

7th Continent "Quest for a continent", Walter Sullivan
Secker & Warburg, London 1957 30 Shillings
Martin Secker & Warburg Ltd. 7 John Street, London W.C. 1,
German raiders based on Kerguelen Ids (Get book)

p. 266 "Of immediate interest to the combatants were the waters near the sub-Antarctic islands and the long arm of the Palmer Peninsula." "Here the German raiders could seek refuge, rendezvous with their supply ships and land their crews for recreation. A bleak and rarely frequented harbor in France's Kerguelen Islands was their chief haven".
German sunk or captured several hundred thousand tons of Allied shipping

p. 268 W. J. L. Sladen Nov. 8, 1948 Eagle House burned down.

p. 270 Green House on Stanning Id. (Then soil from Falklands, now could do hydroponics culture)

Mr. 12, 1942 Finn Ronne turned up.

"White Horizon", Douglas Livessidge, Odham's Press Ltd.
Long Acre, London

28-29 Jan ^{x70} Argentine Island.

30 } Biscoe Island.*
31 }
1 Feb }

16 Days bad weather

17 Melchior Island

18 } Paradise Harbor
19 } Dorson Bay

Add
day for
Dorson

20 Snow Island.

21 } B. O. Higgins area.

22 } Rocquemare

Rocquemare

23

24 Hope Bay.

25

26

27

28

Feb

Snowfield

Seymour

Eagle Is.

area.

P

O

1 travel

2 Deception Island.

3

4

5

King George Island.

6 March Dep. for Valparaiso

Add Berthelot Id
Cape Tuxen
Winter Id

Add:

Cape Anna

Feb 9th

Svend Foyn Hbr
near Cape Anna

Feb 9th

Auguste Id
mostly snow free

Cobalescow Is. &
penquins

10th

Brailmont Cove